

## Publication list of Marcello Federico

### International journals

1. M. Federico and N. Bertoldi, "A Word-to-Phrase Statistical Translation Model", *ACM Transactions on Speech and Language Processing*, Accepted for publication, 2005.
2. J. Goldman, S. Renals, S. Bird, F. de Jong, M. Federico, C. Fleischhauer, M. Kornbluh, L. Lamel, D. W. Oard, C. Stewart, and R. Wright, "Accessing the Spoken Word", *International Journal on Digital Libraries*, vol. 5, n. 4, pp. 287-298. August, 2005.
3. M. Federico and N. Bertoldi, "Broadcast News LM Adaptation over Time", *Computer Speech and Language*, vol. 18, n. 4, pp. 417-435, 2004.
4. N. Bertoldi and M. Federico, "Statistical Models for Monolingual and Bilingual Information Retrieval", *Journal of Information Retrieval*, n. 7, 51-70, 2004.
5. N. Bertoldi, F. Brugnara, M. Cettolo, M. Federico and D. Giuliani, "Cross-Task Portability of a Broadcast News Speech Recognition System", *Speech Communication*, vol. 38, n. 3-4, pp. 335-347, 2002.
6. M. Federico, "A System for the Retrieval of Italian Broadcast News", *Speech Communication*, n. 32, vol. 1-2, pp. 37-47, 2000.
7. M. Federico, M. Cettolo, F. Brugnara and G. Antoniol, "Language Modelling for Efficient Beam-Search". *Computer Speech and Language*, n. 9, pp. 353-379, 1995.

### International conferences (peer-reviewed)

1. M. Cettolo, M. Federico, N. Bertoldi, R. Cattoni and B. Chen "A look inside the ITC-irst SMT System", In *Proceedings of the 10<sup>th</sup> Machine Translation Summit Conference*, pp. 451-457, Phuket, Thailand, 2005.
2. V. H. Quan, M. Federico, M. Cettolo, "Integrated N-best Re-ranking for Spoken Language Translation", In *Proceedings of Interspeech - European Conference on Speech Communication and Technology*, Lisbon, Portugal, 2005.
3. M. Cettolo, F. Brugnara, M. Federico, "Advances in the Automatic Transcription of Lectures", *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, Montreal, Canada, 2004.
4. M. Federico, "Evaluation Frameworks for Speech Translation Technologies", In *Proceedings of the European Conference on Speech Communication and Technology*, Geneva, Switzerland, 2003.
5. N. Bertoldi, F. Brugnara, M. Cettolo, M. Federico, D. Giuliani, E. Leeuwis, V. Sandrini, "The ITC-irst News on Demand Platform", *Proceedings of the European Conference on Information Retrieval Research*, Pisa, 2003.

6. V. Sandrini, M. Federico, "Spoken Information Extraction from Italian Broadcast News", *Proceedings of the European Conference on Information Retrieval Research*, Pisa, Italy 2003.
7. E. Leeuwis, M. Federico, and M. Cettolo, "Automatic Transcription of Conference Lectures", *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, pp. 232-235, Honk Kong, China, 2003.
8. F. Brugnara, M. Cettolo, M. Federico, D. Giuliani, "Issues in Automatic Transcription of Historical Data", In *Proceedings of the International Conference on Spoken Language Processing*, Denver, CO, 2002
9. M. Federico, N. Bertoldi, V. Sandrini, "Bootstrapping Named Entity Recognition for Italian Broadcast News", In *Proceedings of the Conference on Empirical Methods in Natural Language Processing (EMNLP)*, Philadelphia, PA, July, 2002.
10. M. Federico, N. Bertoldi, "Cross-Language Information Retrieval through N-best Query Translations", In *Proceedings of the 25th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, Tampere, Finland, August, 2002.
11. M. Federico, "LM Adaptation through Topic Decomposition and MDI Estimation", In *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, Orlando, FL, May, 2002.
12. M. Federico, N. Bertoldi, "Broadcast News LM Adaptation using Contemporary Texts", In *Proceedings of the European Conference on Speech Communication and Technology*, Aarlborg, Denmark, 2001.
13. N. Bertoldi, M. Cettolo, F. Brugnara, M. Federico and D. Giuliani, "From Broadcast News to Spoken Dialogue: Portability Issues". In *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, Salt Lake City, UT, 2001.
14. Cettolo, F. Brugnara, M. Federico and D. Giuliani, "Advances in Automatic Transcription of Italian Broadcast News". In *Proceedings of the International Conference on Spoken Language Processing*, Beijing, China, 2000.
15. M. Federico, D. Giordani, and P. Coletti, "Development and evaluation of an Italian broadcast news corpus", In *Proceedings of the International Conference on Language Resources and Evaluation*, Athens, Greece, 2000.
16. M. Cettolo, F. Brugnara, M. Federico and D. Giuliani, "A baseline for the transcription of Italian broadcast news". In *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, Istanbul, Turkey, 2000.
17. M. Cettolo, F. Brugnara, M. Federico and D. Giuliani, "A system for the segmentation and transcription of Italian radio news". In *Proceedings of RLAO Content-Based Multimedia Information Access*, Paris, France, 2000.
18. M. Federico, F. Brugnara, and R. Gretter, "Usability Field-test of a Spoken Data-entry System". In *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, Phoenix, AZ, 1999.

19. M. Federico, "Efficient language model adaptation through MDI estimation". In *Proceedings of the European Conference on Speech Communication and Technology*, Budapest, Hungary, 1999.
20. M. Federico and P. Coletti, "A two-passes speech recognition method for information retrieval applications". In *Proceedings of the European Conference on Speech Communication and Technology*, Budapest, Hungary, 1999.
21. M. Federico, "Usability evaluation of a spoken data-entry interface". In *Proceedings of the IEEE International Conference on Multimedia Computing and Systems*, Firenze, Italy, 1999.
22. F. Brugnara and M. Federico, "Dynamic Language Models for Interactive Speech Applications". In *Proceedings of the European Conference on Speech Communication and Technology*, Rhodes, Greece, 1997.
23. U. Ackermann, B. Angelini, F. Brugnara, M. Federico, D. Giuliani, R. Gretter, and H. Niemann, "SpeeData: a Prototype for Multilingual Spoken Data-entry". In *Proceedings of the European Conference on Speech Communication and Technology*, Rhodes, Greece, 1997.
24. F. Brugnara and M. Federico, "Techniques for Approximating a Trigram Language Model". In *Proceedings of the International Conference on Spoken Language Processing*, Philadelphia, PA, 1996.
25. M. Federico, "Bayesian estimation methods for n-gram language model adaptation". In *Proceedings of the International Conference on Spoken Language Processing*, Philadelphia, PA, 1996.
26. U. Ackermann, B. Angelini, F. Brugnara, M. Federico, D. Giuliani, R. Gretter, G. Lazzari, and H. Niemann, "SpeeData: Multilingual Spoken Data Entry". In *Proceedings of the International Conference on Spoken Language Processing*, Philadelphia, PA, 1996.
27. M. Federico and F. Vernesoni, "A speech understanding architecture for an information query system". In *Proceedings of the European Conference on Speech Communication and Technology*, Madrid, Spain, 1995.
28. G. Antoniol, F. Brugnara, M. Cettolo and M. Federico, "Language Model Representations for Beam-Search Decoding". In *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, Detroit, MI, 1995.
29. G. Antoniol, F. Brugnara, M. Cettolo and M. Federico, "Language Model Estimations and Representations for Real-Time Continuous Speech Recognition". In *Proceedings of the International Conference on Spoken Language Processing*, Yokohama, Japan, 1994.
30. B. Angelini, G. Antoniol, F. Brugnara, M. Cettolo, M. Federico, R. Fiutem and G. Lazzari, "Radiological Reporting by Speech Recognition: the A.Re.S. System". In *Proceedings of the International Conference on Spoken Language Processing*, Yokohama, Japan, 1994.
31. G. Antoniol, R. Cattoni, M. Cettolo and M. Federico, "Robust Speech Understanding for Robot Telecontrol". In *Proceedings of the International Conference on Advanced Robotics*, Tokyo, Japan, 1993.

32. G. Antoniol, M. Cettolo and M. Federico. "Techniques for Robust Recognition in Restricted Domains". In *Proceedings of the European Conference on Speech Communication and Technology*, Berlin, Germany, 1993.

### **International books**

1. M. Federico, N. Bertoldi, G.-A. Levow, G. J. F. Jones, "CLEF 2004 Cross-Language Spoken Document Retrieval Track", In C. Peters, P. Clough, J. Gonzalo, G. J. F. Jones, M. Kluck, B. Magnini (Eds.): *Multilingual Information Access for Text, Speech and Images*, LNCS, pp. 816-820, Springer Verlag, 2005
2. M. Federico, G. F. Jones, "The CLEF 2003 Cross-Language Spoken Document Retrieval Track", In Peters, C.; Gonzalo, J.; Braschler, M.; Kluck, M. (eds.), *Comparative Evaluation of Multilingual Information Access Systems*, LNCS, pp. 646-652, Springer Verlag, 2004.
3. N. Bertoldi, M. Federico, "TTC-irst at CLEF 2003: Cross-Language Spoken Document Retrieval", In Peters, C.; Gonzalo, J.; Braschler, M.; Kluck, M. (eds.), *Comparative Evaluation of Multilingual Information Access Systems*, LNCS, pp. 672-675, Springer Verlag, 2004.
4. N. Bertoldi, M. Federico, "TTC-irst at CLEF 2003: Monolingual, Bilingual, and Multilingual Information Retrieval", In Peters, C.; Gonzalo, J.; Braschler, M.; Kluck, M. (eds.), *Comparative Evaluation of Multilingual Information Access Systems*, LNCS, pp. 140-151, Springer Verlag, 2004.
5. G. F. Jones, M. Federico, "CLEF 2002 Cross-Language Spoken Document Retrieval Pilot Track Report", in C. Peters, M. Braschler, J. Gonzalo, M. Kluck (Ed.), *Advances in Cross-Language Information Retrieval*, pp. 446-457, LNCS 2785, Springer, Berlin, 2003.
6. N. Bertoldi, M. Federico, "TTC-irst at CLEF 2002: Using N-best Query Translations for CLIR", in C. Peters, M. Braschler, J. Gonzalo, M. Kluck (Ed.), *Advances in Cross-Language Information Retrieval*, pp. 49-58, LNCS 2785, Springer, Berlin, 2003.
7. N. Bertoldi, M. Federico, "Cross-Language Spoken Document Retrieval on the TREC SDR Collection", in C. Peters, M. Braschler, J. Gonzalo, M. Kluck (Ed.), *Advances in Cross-Language Information Retrieval*, pp. 476-481, LNCS 2785, Springer, Berlin, 2003.
8. N. Bertoldi, M. Federico, "TTC-irst at CLEF 2001: Monolingual and Bilingual Tracks", in C. Peters, M. Braschler, J. Gonzalo, M. Kluck (Ed.), *Evaluation of Cross-Language Information Retrieval Systems*, pp. 94-101, LNCS 2406, Springer, Berlin, 2002.
9. N. Bertoldi, M. Federico, "TTC-irst at CLEF 2000: Italian Monolingual Track", in C. Peters (Ed.), *Cross-Language Information Retrieval and Evaluation*, pp. 261-272, LNCS 2069, Springer, Berlin, 2001.
10. R. DeMori and M. Federico, "Language Model Adaptation". In K. Pointing (ed.), *Computational Models of Speech Pattern Processing*, pp. 280-301, NATO ASI Series, Springer Verlag, 1999.

11. M. Federico and R. DeMori, "Language Modelling". In Renato De Mori (ed.), *Spoken Dialogues with Computers*, chapter 7, Academic Press, London, 1998.
12. U. Ackermann and M. Federico, "Bilinguale Sprachverarbeitung zur Dateneingabe mit SpeeData - Ansätze und erste Ergebnisse". In K. Fellbaum (ed.), *Elektronische Sprachsignalverarbeitung, Studentexte zur Sprachkommunikation*, BTU Cottbus, Germany, 1997.
13. G. Antoniol, F. Brugnara, M. Cettolo and M. Federico, "Language Models Comparison in a Robot Telecontrol Application". In A.J. Rubio Ayuso and J.M. Lopez Soler (eds.), *Speech Recognition and Coding: New Advances and Trends*, NATO ASI Series, Springer Verlag, 1995.
14. A. Corazza, M. Federico, R. Gretter and G. Lazzari, "Design and Acquisition of a Task-Oriented Spontaneous-Speech Data Base", In V. Roberto (ed.), *Intelligent Perceptual Systems*, LNAI, Springer Verlag, 1993.

#### **International workshops (with peer-review)**

1. N. Bertoldi, M. Federico, "A New Decoder for Spoken Language Translation based on Confusion Networks", *To appear in Proceedings of the Automatic Speech Recognition and Understanding Workshop (ASRU)*, Cancun, Mexico, 2005.
2. N. Bertoldi, R. Cattoni, M. Cettolo, B. Chen, M. Federico, "The ITC-irst SMT System for IWSLT-2005", *In Proceedings of the International Workshop Spoken Language Translation (IWSLT)*, Pittsburgh, PA, October 2005.
3. M. Paul, H. Nakaiwa, M. Federico, "Towards Innovative Evaluation Methodologies for Speech Translation", *Working notes of the NTCIR-4 2004 Meeting*, pp. 17-21, Tokyo, Japan, 2004
4. A. Yasuhiro, M. Federico, N. Kando, H. Nakaiwa, M. Paul, J. Tsujii, "Overview of the IWSLT04 Evaluation Campaign", *In Proceedings of the International Workshop on Spoken Language Translation (IWSLT)*, pp. 1-112. September, 2004. Kyoto, Japan.
5. M. Cettolo, M. Federico, "Minimum Error Training of Log-Linear Translation Models", *In Proceedings of the International Workshop on Spoken Language Translation (IWSLT)*, pp. 103-106. September, 2004. Kyoto, Japan.
6. N. Bertoldi, R. Cattoni, M. Cettolo, M. Federico, "The ITC-irst Statistical Machine Translation System for IWSLT-2004", *In Proceedings of the International Workshop on Spoken Language Translation (IWSLT)*, pp. 51-58. September, 2004. Kyoto, Japan.
7. R. Cattoni, M. Federico, and A. Lavie, "Robust Analysis of Spoken Input combining Statistical and Knowledge-based Information Sources", *In Proceedings of the IEEE Workshop on Automatic Speech Recognition and Understanding (ASRU)*, Madonna di Campiglio, Italy, 2001.
8. D. Giuliani, M. Federico, "Unsupervised Language and Acoustic Model Adaptation for Cross Domain Portability", *In Proceedings of the ISCA ITR Workshop on Adaptation Methods*, Sophia-Antipolis, France, 2001.

9. N. Bertoldi, M. Federico, "Lexical Adaptation for Broadcast News Transcription", In *Proceedings of the ISCA ITR Workshop on Adaptation Methods*, Sophia-Antipolis, France, 2001.
10. N. Bertoldi and M. Federico, "Italian Text Retrieval for CLEF 2000 at ITC-irst", *Workshop on Cross-Language Information Retrieval and Evaluation*, Lisbon, Portugal, 2000.
11. M. Cettolo and M. Federico, "Model Selection Criteria for Acoustic Segmentation", In *Proceedings of the ISCA ITR Workshop ASR 2000*, Paris, France, 2000.
12. M. Cettolo, F. Brugnara, M. Federico and D. Giuliani, "A baseline for the transcription of Italian broadcast news". In *Proceedings Workshop Annuale della Associazione Italiana di Intelligenza Artificiale*, Trento, Italy, 1999.
13. U. Ackermann, F. Brugnara, M. Federico, and H. Niemann, "Application of Speech Technology in the Multilingual Speedata Project". In *Proceedings of the CRIM-FORWISS Workshop*, Montreal, Canada, 1996.
14. B. Angelini, F. Brugnara, D. Falavigna, M. Federico, D. Giuliani, M. Omologo, and P. Svaizer. "A Hands Free Dictation System for the Italian Language". In *Proceedings of the IEEE Workshop on Automatic Speech Recognition*, Snowbird, Utah, 1995.
15. G. Antoniol, M. Cettolo and M. Federico. "Robust and Reliable Speech Understanding in Restricted Domains". In *Proceedings of the IEEE Workshop on Automatic Speech Recognition*, Snowbird, Utah, 1993.
16. M. Federico. "Stacked Estimation of Interpolated N-gram Language Model". In *Proceedings of the IEEE Workshop on Automatic Speech Recognition*, Snowbird, Utah, 1993.

### Invited talks and tutorials

- M. Federico, "Challenges in Spoken Language Translation", AIAA Workshop on *Current Challenges in Speech and Natural Language Processing*, Milan, 2005.
- M. Federico, "Hidden Markov Models e l'Algoritmo EM", *Scuola La Visione delle Macchine-GIRPR-LAAPR*, lecture, Trento, 2004.
- M. Federico, "Macchine che Comprendono la Voce", ciclo seminari e film per ragazzi delle scuole superiori, *Uomini e Computer*, Trento, 1999.
- M. Federico, "In-the-field evaluation of a speech based data-entry system". In *Proceedings of the International Workshop Speech and Computer*, invited survey lecture, St. Petersburg, Russia. 1998.
- Renato DeMori, M. Federico, "Language Model Adaptation", In *Proceedings of the Nato Advanced Science Institute*, tutorial lecture, St. Helier, Jersey, 1997.
- M. Federico, "Sistemi per la dettatura di testi e loro applicazioni". Workshop *L'evoluzione delle tecnologie vocali e relative applicazioni nelle telecomunicazioni*, Torino, 7 ottobre, 1997.

M. Federico, "Riconoscimento Vocale: dalla Ricerca alle Applicazioni", *Giornata di Studio su Reti Neurali e Tecnologie Emergenti per Applicazioni in Ambito Finanziario*, Siena, 20 novembre 1996.

A. Corazza, M. Federico, R. Gretter and G. Lazzari, "Design and Acquisition of a Speech Data Base", *Secondo Workshop sulla Percezione*, Trieste, ottobre 1992.

### **Magazines, Newsletters, Interviews**

Interview in a regional radio program of Radio 3, interview about technologies awarded with the Sirio Film Prize, Trento, 2004.

Interviews in the film, "Tecnologie per l'Elaborazione del Linguaggio Parlato", documentary film sponsored by Museo Civico di Rovereto about research activities at ITC-irst, Sirio Film, 2004.

Interview in the national TV program "Leonardo", report about the joint project with Centro Ricerche RAI, Torino 2003.

M. Federico and Michael Pitz. "The European Project CORETEX". In *ELSNEWS The Newsletter of the European Network in Human Language Technology*, Winter, 2001-2002.

Interview in "A World of Understanding", multilingual CD-ROM on Language Engineering in Europe, European Commission, 1998.