

# Complete List of Publications

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# 1 BEST PAPER AWARDS

- L. Welling, H. Ney: Formant Estimation for Speech Recognition. *IEEE Trans. on Speech and Audio Processing*, Vol. 6, No. 1, pp. 36-48, Jan. 1998.
- R. Schlüter, W. Macherey, B. Müller, H. Ney: Comparison of Discriminative Training Criteria and Optimization Methods for Speech Recognition. *Speech Communication*, Vol. 34, pp. 287-310, May 2001.
- F. J. Och, H. Ney: Discriminative Training and Maximum Entropy Models for Statistical Machine Translation. 40th Annual Meeting of the Ass. for Computational Linguistics (ACL), Philadelphia, PA, pp. 295-302, July 2002.
- D. Keysers, T. Deselaers, H. Ney: Pixel-to-Pixel Matching for Image Recognition using Hungarian Graph Matching. *DAGM-Jahrestagung (Deutsche Arbeitsgemeinschaft für Mustererkennung)*, Tübingen, Germany, Springer LNCS Vol. 3175, pp. 154-162, Aug./Sep. 2004.

# 2 PUBLICATIONS IN JOURNALS

1. H. Ney, P. Haasen: Die Statische Reibungsspannung in Mischkristallen. *Nachrichten der Akademie der Wissenschaften in Göttingen*, No. 3, pp. 27-29, May 1977.
2. H. Ney, R. Labusch, P. Haasen: Measurement of Dislocation Velocities in Cu-Al Single Crystals – II. *Acta Metallurgica*, Vol. 25, pp. 1257-1269, 1977.
3. M. H. Kuhn, H. Ney, R. Geppert, R. Gierloff: Automatische Zugangskontrolle mit Hilfe der ‘akustischen Unterschrift’. *VDI-Zeitschrift*, No. 4, pp. 125-130, Feb. 1980.
4. H. Ney: Bestimmung der Zeitverläufe von Intensität und Grundperiode der Sprache für die automatische Sprechererkennung. *Frequenz*, pp. 265-270, Oct. 1981.
5. H. Ney: A Time Warping Approach to Fundamental Period Estimation. *IEEE Trans. on Systems, Man and Cybernetics*, Vol. SMC-12, No. 3, pp. 383-388, May-June 1982.
6. H. Ney: Automatic Speaker Recognition Using Time Alignment of Spectrograms. *Speech Communication*, Vol. 1, No. 2, pp. 135-149, Aug. 1982.
7. H. Ney: A Dynamic Programming Algorithm for Nonlinear Smoothing. *Signal Processing*, Vol. 5, pp. 163-173, March 1983.
8. H. Ney: Dynamic Programming Algorithm for Optimal Estimation of Speech Parameter Contours. *IEEE Trans. on Systems, Man and Cybernetics*, Vol. SMC-13, No. 3, pp. 208-214, March-April 1983.
9. H. Ney: The Use of a One-Stage Dynamic Programming Algorithm for Connected Word Recognition. *IEEE Trans. on Acoustics, Speech and Signal Processing*, Vol. ASSP-32, No. 2, pp. 263-271, April 1984.
10. H. Ney, R. Geppert, D. Mergel, A. Noll, H. Piotrowski, P. Schwartau, H. Tomaschewski: Statistical Modelling and Dynamic Programming in Speech Recognition. *Sprache und Datenverarbeitung*, 8. Jahrgang, No. 1/2, pp. 17-33, 1984.

11. H. Ney, D. Mergel, S. Marcus: On the Automatic Training of Phonetic Units for Word Recognition. *IEEE Trans. on Acoustics, Speech and Signal Processing*, Vol. ASSP-34, No. 1, pp. 209-213, Feb. 1986.
12. H. Ney: Spracherkennung im Projekt SPICOS. *Informatik – Forschungs- und Entwicklungsprojekte*, No. 3, pp. 102-103, 1988.
13. H. Ney, A. Paeseler: Phoneme-Based Continuous Speech Recognition Results for Different Language Models in the 1000-Word SPICOS System. *Speech Communication, Sonderheft “Speech Recognition”*, Vol. 7, pp. 367-373, Dec. 1988.
14. H. Ney: Dynamic Programming Parsing for Context Free Grammars in Continuous Speech Recognition. *IEEE Trans. on Signal Processing*, Vol. SP-39, No. 2, pp. 336-341, Feb. 1991.
15. H. Ney, D. Mergel, A. Noll, A. Paeseler: Data Driven Search Organization for Continuous Speech Recognition. *IEEE Trans. on Signal Processing*, Vol. SP-40, No. 2, pp. 272-281, Feb. 1992.
16. H. Ney: Automatische Spracherkennung: Architektur und Suchstrategie aus statistischer Sicht. *Informatik – Forschung und Entwicklung*, pp. 83-97, April 1992.
17. H. Ney: A Comparative Study of Two Search Strategies for Connected Word Recognition: Dynamic Programming and Heuristic Search. *IEEE Trans. on Pattern Analysis and Machine Intelligence*, Vol. PAMI-14, No. 5, pp. 586-595, May 1992.
18. S. Dobler, D. Geller, R. Haeb-Umbach, P. Meyer, H. Ney, H. Rühl: Design and Use of Speech Recognition Algorithms for a Mobile Radio Telephone. *Speech Communications*, Vol. 12, pp. 221-229, Dec. 1993.
19. H. Ney, A. Noll: Acoustic-Phonetic Modeling in the SPICOS System. *IEEE Trans. on Speech and Audio Processing*, Vol. 2, pp. 312-319, April 1994.
20. R. Haeb-Umbach, H. Ney: Improvements in Beam Search for 10000-Word Continuous Speech Recognition. *IEEE Trans. on Speech and Audio Processing*, Vol. 2, pp. 353-356, April 1994.
21. H. Ney, U. Essen, R. Kneser: On Structuring Probabilistic Dependencies in Language Modelling. *Computer Speech and Language*, Vol. 8, pp. 1-38, 1994.
22. H. Ney, V. Steinbiss, R. Haeb-Umbach, B.-H. Tran, U. Essen: An Overview of the Philips Research System for Large-Vocabulary Continuous-Speech Recognition. *Int. Journal of Pattern Recognition and Artificial Intelligence, Special Issue on Speech Recognition for Different Languages*, Vol. 8, No. 1, pp. 33-70, 1994.
23. H. Ney: On the Probabilistic Interpretation of Neural Net Classifiers and Discriminative Training Criteria. *IEEE Trans. on Pattern Analysis and Machine Intelligence*, Vol. PAMI-17, No. 2, pp. 107-119, Feb. 1995.
24. V. Steinbiss, H. Ney, U. Essen, B.-H. Tran, X. Aubert, C. Dugast, R. Kneser, H.-G. Meier, M. Oerder, R. Haeb-Umbach, D. Geller, W. Höllerbauer, H. Bartosik: Continuous Speech Dictation – From Theory to Praxis. *Speech Communication*, Vol. 17, pp. 19-38, Aug. 1995.
25. H. Ney, U. Essen, R. Kneser: On the Estimation of Small Probabilities by Leaving-One-Out. *IEEE Trans. on Pattern Analysis and Machine Intelligence*, Vol. PAMI-17, No. 12, pp.1202-1212, Dec. 1995.

26. V. Steinbiss, H. Ney, X. Aubert, S. Besling, C. Dugast, U. Essen et al.: The Philips Research System for Continuous-Speech Recognition. *Philips Journal of Research*, Vol. 49, No. 4, pp. 317-352, Dec. 1995.
27. H. Ney: Maschinelle Sprachverarbeitung und Statistik. *Künstliche Intelligenz*, pp. 27-30, No. 5, 1995.
28. S. Ortmanns, H. Ney, X. Aubert: A Word Graph Algorithm for Large Vocabulary Continuous Speech Recognition. *Computer Speech and Language*, Vol. 11, No. 1, pp. 43-72, Jan. 1997.
29. L. Welling, H. Ney: Formant Estimation for Speech Recognition. *IEEE Trans. on Speech and Audio Processing*, Vol. 6, No. 1, pp. 36-48, Jan. 1998.  
**(Best Paper Award)**
30. S. Martin, J. Liermann, H. Ney: Automatic Bigram and Trigram Clustering for Word Classes. *Speech Communication*, Vol. 24, No. 1, pp. 19-37, April 1998.
31. H. Ney, S. Ortmanns: Dynamic Programming Search for Continuous Speech Recognition. *IEEE Signal Processing Magazine*, Vol. 16, No. 5, pp. 64-83, Sep. 1999.
32. H. Ney, S. Nießen, F. J. Och, C. Tillmann, H. Sawaf, S. Vogel: Algorithms for Statistical Translation of Spoken Language. *IEEE Trans. on Speech and Audio Processing*, Special Issue on Language Modeling and Dialogue Systems, Vol. 8, No. 1, pp. 24-36, Jan. 2000.
33. S. Ortmanns, H. Ney: Look-Ahead Techniques for Fast Beam Search. *Computer Speech and Language*, Vol. 14, No. 1, pp. 15-32, Jan. 2000.
34. H. Ney, S. Ortmanns: Progress in Dynamic Programming Search for LVCSR. *Proceedings of the IEEE*, Vol. 88, No. 8, pp. 1224-1240, Aug. 2000.
35. S. C. Martin, H. Ney, C. Hamacher: Maximum Entropy Language Modeling and the Smoothing Problem. *IEEE Trans. on Speech and Audio Processing*, Vol. 8, No. 5, pp. 626-632, Sep. 2000.
36. S. Ortmanns, H. Ney: The Time-Conditioned Approach in Dynamic Programming Search for LVCSR. *IEEE Trans. on Speech and Audio Processing*, Vol. 8, No. 6, pp. 676-687, Nov. 2000.
37. C. Tillmann, S. Vogel, H. Ney, H. Sawaf: Statistical Translation of Text and Speech: First Results with the RWTH System. *Machine Translation*, Vol. 15, pp. 43-74, 2000.
38. F. Wessel, R. Schlüter, K. Macherey, H. Ney: Confidence Measures for Large Vocabulary Continuous Speech Recognition. *IEEE Trans. on Speech and Audio Processing*, Vol. 9, No. 3, pp. 288-298, March 2001.
39. R. Schlüter, W. Macherey, B. Müller, H. Ney: Comparison of Discriminative Training Criteria and Optimization Methods for Speech Recognition. *Speech Communication*, Vol. 34, pp. 287-310, May 2001.  
**(Best Paper Award)**
40. R. Schlüter, H. Ney: Model-based MCE Bound to the True Bayes' Error. *IEEE Signal Processing Letters*, Vol. 8, No. 5, pp. 131-133, May 2001.
41. J. Dahmen, D. Keysers, H. Ney, M. Güld: Statistical Image Object Recognition using Mixture Densities. *Journal of Mathematical Imaging and Vision*, Kluwer Academic Publishers, Vol. 14, No. 3, pp. 285-296, May 2001.

42. A. Sixtus, H. Ney: From Within-Word Model Search to Across-Word Model Search in Large Vocabulary Continuous Speech Recognition. *Computer Speech and Language*, Vol. 16, No. 2, pp. 245-271, May 2002.
43. P. Beyerlein, X. Aubert, R. Haeb-Umbach, M. Harris, D. Klakow, A. Wendemuth, S. Molau, H. Ney, M. Pitz, A. Sixtus: Large Vocabulary Continuous Speech Recognition of Broadcast News – The Philips/RWTH Approach. *Speech Communication*, Vol. 37, No. 1/2, pp. 109-131, May 2002.
44. H. Ney: Maschinelle Sprachverarbeitung – Der statistische Ansatz in der Spracherkennung und Sprachübersetzung. *Informatik-Spektrum*, pp. 94-102, May 2002.
45. L. Welling, H. Ney, S. Kanthak: Speaker Adaptive Modeling by Vocal Tract Normalization. *IEEE Trans. on Speech and Audio Processing*, Vol. 10, pp. 415-427, Sep. 2002.
46. D. Keysers, J. Dahmen, H. Ney, B. Wein, T. Lehmann: A Statistical Framework for Model-based Image Retrieval in Medical Applications. *Journal of Electronic Imaging, Special Section on Model-based Medical Image Processing and Analysis*, Vol. 12, No. 1, pp. 59-68, Jan. 2003.
47. W. Macherey, J. Viechtbauer, H. Ney: Probabilistic Aspects in Spoken Document Retrieval. *EURASIP Journal on Applied Signal Processing*, Vol. 2003, No. 2, pp. 115-127, Feb. 2003.
48. F. J. Och, H. Ney: A Systematic Comparison of Various Alignment Models. *Computational Linguistics*, Vol. 29, No. 1, pp. 19-51, March 2003.
49. C. Tillmann, H. Ney: Word Re-ordering and a DP Beam Search Algorithm for Statistical Machine Translation. *Computational Linguistics*, Vol. 29, No. 1, pp. 97-133, March 2003.
50. S. Molau, D. Keysers, H. Ney: Matching Training and Test Data Distributions for Robust Speech Recognition. *Speech Communication*, Vol. 41, No. 4, pp. 579-601, Nov. 2003.
51. F. Casacuberta, H. Ney, F. J. Och, E. Vidal et al.: Some Approaches to Statistical and Finite-State Speech-to-Speech Translation. *Computer Speech and Language*, Vol. 18, No. 1, pp. 25-47, Jan. 2004.
52. D. Keysers, W. Macherey, H. Ney, J. Dahmen: Adaptation in Statistical Pattern Recognition Using Tangent Vectors. *IEEE Trans. on Pattern Analysis and Machine Intelligence*, Vol. 26, No. 2, pp. 269-274, Feb. 2004.
53. A. Toselli, A. Juan, J. Gonzalez, I. Salvador, E. Vidal, F. Casacuberta, D. Keysers, H. Ney: Integrated Handwriting Recognition and Interpretation using Finite State Models. *Int. Journal of Pattern Recognition and Artificial Intelligence*, Vol. 18, No. 4, pp. 519-539, June 2004.
54. S. Nießen, H. Ney: Statistical Machine Translation with Scarce Resources Using Morpho-syntactic Information. *Computational Linguistics*, Vol. 30, No. 2, pp. 181-204, June 2004.
55. T. Lehmann, M. Güld, C. Thies, B. Fischer, K. Spitzer, D. Keysers, H. Ney, M. Kohnen, H. Schubert, B. Wein: Content-based Image Retrieval in Medical Applications. *Information in Medicine*, Vol. 43, No. 4, pp. 354-361, 2004.
56. F. J. Och, H. Ney: The Alignment Template Approach to Statistical Machine Translation. *Computational Linguistics*, Vol. 30, No. 4, pp. 417-449, Dec. 2004.
57. F. Wessel, H. Ney: Unsupervised Training of Acoustic Models for Large Vocabulary Continuous Speech Recognition. *IEEE Trans. on Speech and Audio Processing*, Vol. 13, No. 1, pp. 23-31, Jan. 2005.

58. M. Hilger, H. Ney: Quantile Based Histogram Equalization for Noise Robust Large Vocabulary Speech Recognition. *IEEE Trans. on Speech and Audio Processing*, 2005, in press.
59. M. Pitz, H. Ney: Vocal Tract Normalization Equals Linear Transformation in Cepstral Space. *IEEE Trans. on Speech and Audio Processing*, 2005, in press.

## 3 INVITED TALKS

### 3.1 Invited Talks with Paper

1. H. Ney: Dynamic Programming for Speech Recognition. Eighth Int. Conf. on Pattern Recognition, Tutorial Lecture, Paris, pp. 235-262, Oct. 1986.
2. H. Ney: Automatic Speech Recognition in the SPICOS System. Konferenz "VDE-Tage Budapest 1987", Budapest, erschienen in "Hiradastechnika"(ungarisch), pp. 198-201, May 1987.
3. H. Ney: Acoustic Modelling of Phoneme Units for Continuous Speech Recognition. Fifth European Signal Processing Conf., Barcelona, pp. 65-72, Sep. 1990.
4. H. Ney: Automatische Erkennung kontinuierlicher Sprache im Rahmen des Forschungsprojektes SPICOS. Konf. Elektronische Sprachsignalverarbeitung, TU Berlin, pp. 95-102, Sep. 1990.
5. H. Ney, R. Billi: Prototype Systems for Large Vocabulary Speech Recognition. Second European Conf. on Speech Communication and Technology, Genua, pp. 193-200, Sep. 1991.
6. H. Ney: Stochastic Grammars and Pattern Recognition. NATO Advanced Studies Institute "Speech Recognition and Understanding: Recent Advances, Trends and Applications", Cetraro, Italy, Juli 1990, Springer, Berlin, pp. 319-344, 1992.
7. H. Ney, X. Aubert, R. Haeb-Umbach: Overview of the Philips Continuous Speech Recognition System and Evaluation on DARPA RM. US-DARPA Workshop "Artificial Neural Network Technology Speech Program", Stanford University, CA, Proceedings, pp. 83-88, Sep. 1992.
8. H. Ney: Search Strategies for Large-Vocabulary Continuous-Speech Recognition, NATO Advanced Studies Institute "New Advances and Trends in Speech Recognition and Coding", Bubion, Spain, June-July 1993, Springer, Berlin, pp. 210-225, 1995.
9. H. Ney: Modeling and Search in Continuous Speech Recognition. Third European Conf. on Speech Communication and Technology, Berlin, pp. 491-498, Sep. 1993.
10. H. Ney, V. Steinbiss, X. Aubert, R. Haeb-Umbach: Progress in Large-Vocabulary Continuous Speech Recognition, FORWISS-CRIM Workshop, München, Sep. 1994, pp. 75-92, in H. Niemann, R. de Mori, G. Hanrieder (eds.): *Progress and Prospects of Speech Research and Technology*, Infix-Verlag, St. Augustin/Bonn, ISBN 3-929037-91-2, 1994.
11. H. Ney: The Pronunciation Lexicon in Automatic Speech Recognition. Konvens 94 – Konferenz "Verarbeitung natürlicher Sprache", Wien, pp. 3-12, Sep. 1994.
12. S. Ortmanns, H. Ney, A. Eiden, N. Coenen: Look-Ahead Techniques for Improved Beam Search. FORWISS-CRIM Workshop, Montreal, Canada, pp. 10-22, Oct. 1996.
13. H. Ney, S. Ortmanns: Progress in Dynamic Programming Search for LVCSR. IEEE Workshop on Automatic Speech Recognition and Understanding, Sta. Barbara, CA, pp. 287-294, Dec. 1997.

14. H. Ney: Stochastic Modelling of Knowledge Sources in Automatic Speech Recognition. Gesellschaft für Klassifikation, Potsdam, March 1997, pp. 313-334, in I. Balderjahn, R. Mathar, M. Schader (eds.): *Data Highways and Information Flooding, a Challenge for Classification and Data Analysis*, Springer, Berlin, 1998.
15. H. Ney: The Use of the Maximum Likelihood Criterion in Language Modelling. NATO Advanced Studies Institute, St. Helier, Jersey, July 1997, pp. 259-279, in K. Ponting (ed.): *Computational Models of Speech Pattern Processing*, Springer, Berlin, 1999.
16. H. Ney: Statistical Modelling – From Speech Recognition to Text Translation. Int. School on Neural Nets “Eduardo R. Caianiello”, Salerno, Italy, Oct. 1998, pp. 190-215, in G. Chollet, M. Di Benedetto, A. Esposito, M. Marinaro (eds.): *Speech Processing, Recognition and Artificial Neural Networks*, Springer, Berlin, 1999.
17. H. Ney: Stochastic Modelling: From Pattern Recognition to Speech Recognition and Language Translation. DAGM-Jahrestagung (Deutsche Arbeitsgemeinschaft für Mustererkennung), Bonn, Sep. 1999, pp. 325-337, in W. Förstner et al. (eds.): *Mustererkennung 1999*, Springer, Berlin 1999.
18. H. Ney: Stochastic Modelling: From Pattern Classification to Speech Recognition and Translation. Int. Conf. on Pattern Recognition, Barcelona, Vol. 3, pp. 25-32, Sep. 2000.
19. H. Ney: Stochastic Modelling: From Pattern Classification to Language Translation. Data-Driven Machine Translation Workshop, 39th Annual Meeting of the Ass. for Computational Linguistics (ACL), Toulouse, pp. 33-37, July 2001.
20. H. Ney: The Statistical Approach to Spoken Language Translation. IEEE Automatic Speech Recognition and Understanding Workshop, Madonna di Campiglio, Italy, 8 pages, CD ROM, IEEE Catalog No. 01EX544, Dec. 2001.
21. H. Ney: The Statistical Approach to Machine Translation and a Roadmap for Speech Translation. Special Session, Europ. Conf. on Speech Communication and Technology, Geneva, Switzerland, pp. 361-364, Sep. 2003.
22. H. Ney: The Statistical Approach to Spoken Language Translation. Int. Workshop on Spoken Language Translation (IWSLT 2004), Kyoto, Japan, pp. XV-XVI (ext.abs.), Sep./Oct. 2004.
23. H. Ney: Statistical Machine Translation and its Challenges. Special Session, Int. Conf. on Spoken Language Processing (ICSLP 2004), Jeju Island, Korea, pp. 361-364, Oct. 2004.

## 3.2 Invited Talks without Paper

1. H. Ney: Mustererkennung und Spracherkennung. VDMA-Informationsveranstaltung “Sprach- und Mustererkennung”, Verband Deutscher Maschinen- und Anlagenbau e.V., Fachgemeinschaft Büro- und Informationstechnik, Frankfurt am Main, May 1983.
2. H. Ney: Pattern Matching Systems. IEEE Workshop “Frontiers of Speech Recognition”, Harriman, NY, Dec. 1985.
3. H. Ney: Automatische Segmentierung fließender Rede. GLDV-Jahrestagung, Podiumsdiskussion, Gesellschaft für linguistische Datenverarbeitung, Bonn, March 1987.
4. H. Ney: Maschinelle Spracherkennung – Status und Trends. IBM-Hochschulkolloquium “Maschinelle Sprachverarbeitung”, Heidelberg, May 1990.

5. H. Ney: A Prototype System for Large Vocabulary, Continuous Speech Recognition. Konferenz "Voice Systems Worldwide", Hannover, March 1992.
6. H. Ney: Large Vocabulary, Continuous Speech Recognition. ELSNET/ESCA Workshop "Integrating Speech and Natural Language", European Language and Speech Network / European Speech Communication Ass., Dublin, July 1992.
7. H. Ney: Large-Vocabulary Continuous-Speech Recognition. Int. Workshop on Speech Translation, Schloß Dagstuhl/Wadern, Oct. 1992.
8. H.-W. Rühl, H. Ney: How Might Speech Recognition Influence the Future Telephone Network ? COST-232 Workshop, Rom, Nov. 1992.
9. H. Ney: Automatische Erkennung kontinuierlicher Sprache für großen Wortschatz. Kolloquium der DAGA'93, Deutsche Arbeitsgemeinschaft für Akustik, Frankfurt am Main, March-April 1993.
10. H. Ney: Maschinelle Spracherkennung – Status und Trends. Kolloquium "Sprachtechnologie 2000", Bundesministerium für Forschung und Technologie, Bonn, June 1993.
11. H. Ney: Speech Recognition vs. Pattern Recognition. IEEE Workshop on Automatic Speech Recognition, Snowbird, UT, p. 58 (abstract), Dec. 1993.
12. H. Ney: Statistical Methods in Speech and Language Processing. 5-Day-Course in the European Summer School on Corpus-Based Methods, Utrecht, July 1994.
13. H. Ney, U. Essen, R. Kneser: Smoothing and Clustering in Language Modeling. Tutorial Lecture, US-ARPA Workshop "Frontiers in Speech Recognition", Rutgers University, Piscatway, NJ, July-Aug. 1994.
14. H. Ney: Experiments in  $m$ -gram Language Modeling. Final Day Review, US-ARPA Workshop "Frontiers in Speech Recognition", Rutgers University, Piscatway, NJ, July-Aug. 1994.
15. H. Ney, A. Stolcke: Language Modeling – Portability and Adaptation. Final Day Review, US-ARPA Workshop "Language Modeling", Johns Hopkins University, Baltimore, MD, July-Aug. 1995.
16. H. Ney: Language Modelling and Search – Expert's Summary. IEEE Int. Conf. on Acoustics, Speech and Signal Processing, München, April 1997.
17. H. Ney: Language Modelling and Search for Large Vocabulary Continuous Speech Recognition. Tutorial Lecture, ENST Paris, March 1998.
18. H. Ney: Statistical Machine Translation. Tutorial Lecture, ENST Paris, March 1998.
19. H. Ney: Search for Large Vocabulary Continuous Speech Recognition. Tutorial Lecture, Summer School (ESCA-IIASS-EMSCSC) "Acoustic Speech Processing and Neural Networks for Automatic Speech Recognition", Salerno, Italy, Oct. 1998.
20. H. Ney: Statistical Translation. Tutorial Lecture, Summer School (ESCA-IIASS-EMSCSC) "Acoustic Speech Processing and Neural Networks for Automatic Speech Recognition", Salerno, Italy, Oct. 1998.
21. H. Ney: Stochastic Modelling: From Pattern Recognition to Language Translation. National Symposium of Pattern Recognition and Image Analysis, Bilbao, Spain, May 1999.
22. H. Ney: Large Vocabulary Continuous Speech Recognition. Tutorial Lecture, National Symposium of Pattern Recognition and Image Analysis, Bilbao, Spain, May 1999.



23. H. Ney: Highlights of Eurospeech-99 – Expert’s Summary. Europ. Conf. on Speech Communication and Technology, Budapest, Sep. 1999.
24. H. Ney: Dynamic Programming Search and Large Vocabulary Continuous Speech Recognition. DARPA/Bell Labs Workshop–2000 on Spoken Language Recognition and Understanding, Summit, NJ, Feb. 2000.
25. H. Ney: Stochastic Modelling: From Pattern Recognition to Spoken Language Processing. Heraeus–Seminar Physikzentrum Bad Honnef, April 2000.
26. H. Ney: Statistical Translation. Verbmobil – Final Symposium, July 2000, Saarbrücken.

## 4 CONTRIBUTIONS TO BOOKS

1. H. Ney (Dissertation): ‘Untersuchungen zur automatischen Erkennung kooperativer Sprecher über Telefon’. Hamburger Phonetische Beiträge, Vol. 42, Helmut Buske Verlag, Hamburg, 1983.
2. H. Ney: ‘Methoden der Sprachanalyse’, pp. 117-154, ‘Verfahren der Mustererkennung’, pp. 225-258, ‘Sprecherverification über Telefon’, pp. 297-313, ‘Wortkettenerkennung’, pp. 358-372, in K. Sickert (ed.): *Automatische Spracheingabe und Sprachausgabe*, Verlag Markt und Technik, Haar/München, 1983.
3. H. Bourlard, Y. Kamp, H. Ney, C. J. Wellekens: ‘Speaker Dependent Connected Speech Recognition via Dynamic Programming and Statistical Methods’, pp. 115-148, in M.R. Schröder (ed.): *Speech and Speaker Recognition*, Bibliotheca Phonetica, Vol. 12, Karger, Basel, 1985.
4. H. Ney: ‘Automatic Speech Recognition’, pp. 735-762, in A.E. Cawkell (ed.): *Handbook of Information Technology and Office Systems*, North-Holland, Amsterdam, 1986.
5. D. Mergel, H. Ney: ‘Automatische Erkennung kontinuierlicher Sprache’, pp. 108-113, in “Philips – Unsere Forschung in Deutschland”, Aachen/Hamburg, 1988.
6. A. Noll, H. Ney: ‘Worterkenner für kleinen Wortschatz’, pp. 113-116, 1988. in “Philips – Unsere Forschung in Deutschland”, Aachen/Hamburg, 1988.
7. H. Ney: ‘Automatic Speech Recognition’, pp. 586-599, in I. S. Batori, W. Lenders, W. Putschke (eds.): *Computational Linguistics*, de Gruyter, Berlin, 1989.
8. H. Ney, V. Steinbiss, A. Paeseler: ‘A Research Prototype System for Large Vocabulary Continuous Speech Recognition’, pp. 79-90, in H. Mangold (ed.): *Sprachliche Mensch-Maschine-Kommunikation*, Oldenbourg-Verlag, München, 1992.
9. V. Steinbiss, H. Ney, R. Haeb-Umbach, B.-H. Tran, U. Essen, R. Kneser et al.: ‘The Philips Research System for Large-Vocabulary Continuous-Speech Recognition’, in K. C. Varghese, S. Pfleger, J. P. Lefevre (eds.): *Advanced Speech Applications – European Research on Speech Technology*, Research Reports ESPRIT, Vol. 1, ISBN-3-540-58142-1, 1994.
10. H. Ney, X. Aubert: ‘Dynamic Programming Search: From Digit Strings to Large Vocabulary Word Graphs’, pp. 385-412, in C.-H. Lee, F. K. Soong, K. K. Paliwal (eds.): *Automatic Speech and Speaker Recognition: Advanced Topics*, Kluwer Academic Publishers, Dordrecht, March 1996.

11. H. Ney: 'Corpus-Based Statistical Methods in Speech and Language Processing', pp. 1-26, in G. Bloothoof, S. Young (eds.): *Corpus-Based Methods in Speech and Language*, Kluwer Academic Publishers, Dordrecht, 1997.
12. H. Ney, S. Martin, F. Wessel: 'Statistical Language Modelling by Leaving-One-Out', pp. 174-207, in G. Bloothoof, S. Young (eds.): *Corpus-Based Methods in Speech and Language*, Kluwer Academic Publishers, Dordrecht, 1997.
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