

**Martin Russell  
Publication List**

**Last updated Tuesday, 14 December 2004**

**2005**

1. M J Russell and P J B Jackson, "A multiple-level linear/linear segmental HMM with a formant-based intermediate layer", *to appear in Computer Speech and Language*.

**2004**

2. Shona M D'Arcy, Martin J Russell, Sue R Browning and Mike J Tomlinson, "The Accents of the British Isles (ABI) Corpus", *Proc. Modélisations pour l'Identification des Langues, MIDL 2004, Paris, pp 115-119*.
3. Shona M D'Arcy, Lit Ping Wong and Martin J Russell, "An investigation of read and spontaneous children's speech using two new databases", *Proc. ICSLP 2004, Korea, October 2004*.
4. Martin J Russell and Philip J B Jackson, "Regularized re-estimation of stochastic duration models for phone classification", *Presented at the 75<sup>th</sup> Anniversary Meeting of the Acoustical Society of America, New York, 24-28 May 2004. Abstract published in JASA 115(5, Pt.2): 2429, May 2004*.
5. Ying Liu, Martin Russell and Michael Carey, "Speaker recognition using a trajectory-based segmental HMM", *Proc Odyssey 2004 Speaker and Language Recognition Workshop, Toledo, Spain, 31<sup>st</sup> May – 3<sup>rd</sup> June 2004, pp 45-50*.
6. N Cooke, M J Russell and A S Meyer, "Evaluation of Hidden Markov Model robustness in uncovering focus of visual attention from noisy eye-tracker data" *Presented at ETRA 2004 Eye Tracking Research and Applications Symposium, San Antonio, TX, USA, March 2004*.
7. A. Batliner, C. Hacker, S. Steidl, E. Nöth, S. D'Arcy, M. Russell, and M. Wong, "'You stupid tin box' - children interacting with the AIBO robot: A cross-linguistic emotional speech corpus", *Proc. LREC 2004, pp 171-174*.

**2003**

8. J H Jin, M J Russell, M J Carey, J Chapman, H Lloyd-Thomas and G D Tattersall, "A spoken language interface to an electronic programme guide", *Proc. EUROSPEECH'03, Geneva, Switzerland, September 2003*.
9. M J Russell and P J B Jackson, "The effect of an intermediate articulatory layer on the performance of a segmental HMM", *Proc. EUROSPEECH'03, Geneva, Switzerland, September 2003*.
10. P J B Jackson and M J Russell, "Covariance and weighting of harmonically decomposed streams for ASR", *Proc. EUROSPEECH'03, Geneva, Switzerland, September 2003*.
11. David M Moreno, Philip J B Jackson, Javier Hernando and Martin J Russell, "Improved ASR in noise using harmonic decomposition", *Proc. 15<sup>th</sup> International Congress of Phonetic Sciences, ICPhS, Barcelona, 2003*.
12. M J Carey, G D Tattersall, H Lloyd-Thomas and M J Russell, "Inferring identity from user behaviour", *IEE Proc. Vision, Image and Signal Processing, vol 150, no6, 2003*.
13. M J Russell and J A Bilmes, "Introduction to the Special Issue on New Computational Paradigms for Acoustic Modeling in Speech Recognition", *Computer Speech and Language, Vol. 17, No 2-3, pp 107-112, 2003*.
14. M J Russell, P J B Jackson and L P Wong, "Development of articulatory-based multi-level segmental HMMs for phonetic classification in ASR", *Proceedings of EC-VIP-MC '03, Zagreb, Croatia, July 2003*.

**2002**

15. P J B Jackson and M J Russell, "Models of speech dynamics in a segmental-HMM recogniser using intermediate linear representations", *Proceedings of ICSLP 2002, Denver, September 2002*
16. Li Qun and Martin Russell, "An analysis of the causes of increased error rates in children's speech recognition", *Proceedings of ICSLP 2002, Denver, September 2002*
17. N Wilkinson and M J Russell, "Improved phone recognition on TIMIT using formant frequency data and confidence measures", *Proceedings of ICSLP 2002, Denver, September 2002*
18. P J B Jackson, B H Lo and M J Russell, "Data-driven, non-linear, formant-to-acoustic mapping for ASR", *IEE Electronics Letters, Vol. 38, No. 13, 20<sup>th</sup> June 2002, pp 667-669.*

#### **2001**

19. Li Qun and Martin Russell, "Why is recognition of children's speech difficult?", *Proc. EUROSPEECH 2001, Aalborg, Denmark, pp 2671-2674*
20. L P Wong and M J Russell, "Speaker verification under additive noise conditions with non-stationary SNR using PMC", *Proc. 2001: A Speaker Odyssey, The Speaker Recognition Workshop, June 18-22, Crete, Greece, pp 95-100*
21. L P Wong and M J Russell, "Text-dependent speaker verification under noisy conditions using parallel model combination", *Proc IEEE Int Conf on Acoustics, Speech and Signal Processing, ICASSP-2001, Salt Lake City, UT, USA*
22. N Wilkinson and M J Russell, "Progress towards improved speech modelling using asynchronous sub-bands and formant frequencies", *Proc. Institute of Acoustics, Vol. 23, Pt 3, 27-36, 2001*
23. L P Wong and M J Russell, "Text-dependent speaker verification under noisy conditions using parallel model combination", *Proc. Institute of Acoustics, Vol. 23, Pt 3, 143-152, 2001*
24. Simon Smith and Martin Russell, "Determining query types for information access", *Proc. 4<sup>th</sup> annual CLUK Colloquium, pp 80-89, University of Sheffield, 10-11 January 2001*

#### **2000**

25. J B Hooper and M J Russell, "Objective quality analysis of a Voice over Internet Protocol system", *IEE Electronics Letters, Vol 36, No. 22, pp 1900-1901, 26<sup>th</sup> October 2000*
26. S J Melnikoff, P B James-Roxby, S F Quigley and M J Russell, "Reconfigurable computing for speech recognition: preliminary findings", *FPL 2000, pp. 495-504, 2000*
27. M J Russell, R W Series, J L Wallace, C Brown and A Skilling, "The STAR system: an interactive pronunciation tutor for young children", *Computer Speech and Language, Vol. 14, Number 2, 161-175, April 2000*

#### **1999**

28. M J Russell, K M Ponting and M J Tomlinson, "Measure of local speaking-rate for automatic speech recognition", *IEE Electronics Letters, Vol 35, No. 10, 787-789, May 1999*
29. Wendy J Holmes and Martin J Russell, "Probabilistic trajectory segmental HMMs", *Computer Speech and Language, Vol 13, Number 1, January 1999*

#### **1998**

30. Martin Russell and Wendy Holmes, "Progress towards a unified model for speech pattern processing" *Proc. Institute of Acoustics, Vol 20, Part 6 (1998) pp 21-28*
31. Julie L Wallace, Martin Russell, Catherine Brown and Adrian Skilling, "Applications of Speech Recognition in the Primary School Classroom", *ESCA Workshop on Speech Technology in Language Learning (STiLL), May 25-27, 1998, Marholmen, Sweden.*

#### **1997**

32. Martin J Russell, "Progress towards speech models that model speech", *Proc. IEEE Automatic Speech Recognition and Understanding Workshop, Santa Barbara, CA, USA, 14<sup>th</sup>-17<sup>th</sup> December 1997 (Invited talk)*.
33. M J Tomlinson, M J Russell, R K Moore, A P Buckland and M A Fawley, "Modelling asynchrony in speech using elementary single-signal decomposition", *Proc. ICASSP'97, Munich, 21st-24th April, 1997*.
34. Wendy J Holmes and Martin J Russell, "Linear dynamic segmental HMMs: variability representation and training procedure", *Proc. ICASSP'97, Munich, 21st-24th April, 1997*.
35. Martin J Russell and Wendy J Holmes, "Linear Trajectory Segmental HMMs", *IEEE Signal Processing Letters, Vol 4, Number 3, March 1997*

## 1996

36. Martin Russell, "Advances in Speech Recognition", *Proceedings of the Institute of Acoustics, Vol 18, Part 9, 1996 (Keynote Lecture to the IOA Autumn Conference on Speech and Hearing, Windermere, 21-24 November, 1996)*.
37. Wendy J Holmes and Martin J Russell, "Modelling variability in speech patterns using dynamic segmental HMMs", *Proceedings of the Institute of Acoustics, Vol 18, Part 9, 1996 (IOA Autumn Conference on Speech and Hearing, Windermere, 21-24 November, 1996)*.
38. Martin Russell, Catherine Brown, Adrian Skilling, Rob Series, Julie Wallace, Bill Bonham and Paul Barker, "Applications of automatic speech recognition to speech and language development in young children", *Proceedings of the Institute of Acoustics, Vol 18, Part 9, 1996 (IOA Autumn Conference on Speech and Hearing, Windermere, 21-24 November, 1996)*
39. Martin Russell, Catherine Brown, Adrian Skilling, Rob Series, Julie Wallace, Bill Bonham and Paul Barker, "Applications of automatic speech recognition to speech and language development in young children", *Proceedings of the International Conference on Spoken Language Processing, ICSLP'96, Philadelphia, USA, 3-6 October 1996*
40. P N Garner, S R Browning, R K Moore and M J Russell, "A theory of word frequencies and its application to dialogue move recognition", *Proceedings of the International Conference on Spoken Language Processing, ICSLP'96, Philadelphia, USA, 3-6 October 1996*.
41. Wendy J Holmes and Martin J Russell, "Modelling speech variability with segmental HMMs", *Proc IEEE ICASSP'96, Atlanta, 7-10 May 1996*.
42. M J Tomlinson, M J Russell and N M Brooke, "Integrating audio and visual information to provide highly robust speech recognition", *Proc IEEE ICASSP'96, Atlanta, 7-10 May 1996*.

## 1995

43. Stuart Bird, Sue Browning, Roger Moore and Martin Russell, "Dialogue move recognition using topic spotting techniques", *Proc. ESCA Workshop on Spoken Dialogue Processing - Theory and Practice, Vigsø, Denmark, 30 May-2 June 1995*.
44. Wendy J Holmes and Martin J Russell, "Speech Recognition using a linear dynamic segmental HMM", *Proc. Eurospeech'95, Madrid, Spain, September 1995, pp 1611-1614*
45. Wendy Holmes and Martin Russell, "Experimental evaluation of segmental HMMs", *Proc IEEE Int. Conf. on Acoustics, Speech and Signal Processing, ICASSP'95, Detroit, USA, May 8-12, 1995*

## 1994

46. R K Moore, M J Russell, P Nowell, S N Downey and S R Browning, "A comparison of Phoneme Decision Tree (PDT) and Context Adaptive Phone (CAP) based approaches to vocabulary-independent speech recognition", *Proc. IEEE International Conf. on Acoustics, Speech and Signal Processing, ICASSP'94, Adelaide, Australia, April 1994\**

47. Wendy J Holmes and Martin J Russell, "Automatic speech recognition using segmental hidden Markov models", Proc Institute of Acoustics Autumn Conference on Speech and Hearing, Windermere, 24-27 November, 1994.

### 1993

48. M J Russell, "A segmental HMM for speech pattern modelling", Proc. IEEE International Conf. on Acoustics, Speech and Signal Processing, Minneapolis, April 1993.
49. Ian Lewin, Martin Russell, David Carter, Sue Browning, Keith Ponting and Stephen Pulman, "A speech-based route enquiry system built from general-purpose components", Proc. Eurospeech'93, Berlin, Germany, September 1993.
50. S N Downey, M J Russell, P Nowell, D Bijl, K Galloway and K M Ponting, "Experiments in vocabulary independent speech recognition using phoneme decision trees", Proc. Eurospeech'93, Berlin, Germany, September 1993.

### 1992

51. M J Russell, "ARMADA: a system for automatic recognition of continuously spoken airborne reconnaissance mission reports", Battlefield Vetrronics and Communications International 92, 2-4 June 1992, Chertsey, Surrey, UK.
52. M J Russell, "A segmental statistical model for speech pattern processing", Proc Institute of Acoustics Autumn Conference, Windermere, 1992.
53. M J Russell, "The development of the speaker-independent ARM speech recognition system", Proc Institute of Acoustics Autumn Conference, Windermere, 1992.
54. S N Downey and M J Russell, "A decision tree approach to task-independent speech recognition", Proc Institute of Acoustics Autumn Conference, Windermere, 1992.
55. M J Russell, R W Series and J L Wallace, "Children's speech training aid", Patent application number 92.23066-3, filed 4 November 1992\*.

### 1991

56. M J Russell, "The ARMADA continuous speech recognition system", Proc. IEE colloquium on 'Systems and applications of man-machine interaction using speech I/O', London, 18 March 1991.

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57. M J Russell, K M Ponting, S M Peeling, S R Browning, J S Bridle and R K Moore, "The ARM continuous speech recognition system", Proc. IEEE International Conf. on Acoustics, Speech and Signal Processing, Albuquerque, New Mexico, April 1990.
58. M J Russell, K M Ponting and S M Peeling, "The ARMADA speech recognition system", Proc. Voice Systems Worldwide 1990, London, May 30 - June 1, 1990.
59. M J Russell and K M Ponting, "Recent results from the ARM continuous speech recognition project", Proceedings of the DARPA Spoken Language Systems Workshop, Hidden Valley, Somerset PA, 22-25 June 1990.
60. L Dodd, J S Bridle and M J Russell, "HMM-MLP Hybrids for Isolated Word Recognition", Proc. Institute of Acoustics Autumn Conf., Windermere, 1990.
61. S R Browning, R K Moore, K M Ponting and M J Russell, "A Phonetically Motivated Analysis of the Performance of the ARM Continuous Speech Recognition System", Proc. Institute of Acoustics Autumn Conf., Windermere, 1990.

### 1989

62. K M Ponting and M J Russell, "The ARM Project: Automatic recognition of spoken airborne reconnaissance reports", Proc. military and government Speech Tech'89, Arlington, VA, 13-15 November 1989.

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63. A P Varga, R K Moore, J S Bridle, K M Ponting and M J Russell, "Noise compensation algorithms for use with hidden Markov model based speech recognition", Proc. IEEE International Conf. on Acoustics, Speech and Signal Processing, New York, April 11-14 1988.

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#### **1987**

65. M J Russell and A E Cook, "Experimental Evaluation of Duration Modelling Techniques for Automatic Speech Recognition", Proc. IEEE International Conf. on Acoustics, Speech and Signal Processing, Dallas, April 1987, pp 2376-2379.

#### **1986**

66. M J Russell, R K Moore and M J Tomlinson, "Dynamic programming and statistical modelling in automatic speech recognition", Journal of the Operational Research Society, vol. 37, No. 1, January 1986, pp 21-30.

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68. A E Cook and M J Russell, "Improved Duration Modelling in Hidden Markov Models using Series-Parallel Configurations of States", Proc. Institute of Acoustics Autumn Conf., Windermere, 1986, pp 299-306.

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#### **1985**

70. M J Russell and R K Moore, "Explicit modelling of state occupancy in hidden Markov models for automatic speech recognition", Proc. IEEE Int. Conf. on Acoustics, Speech and Signal Processing, Tampa, 26-29 March 1985, pp 5-8.

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#### **1983**

74. M J Russell, R K Moore and M J Tomlinson, "Some techniques for incorporating local timescale variability information into a dynamic time-warping algorithm for automatic speech recognition", Proc. IEEE International Conf. on Acoustics, Speech and Signal Processing, Boston, 1983, pp 1037-1040.

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#### **1982**

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79. R K Moore, D Beardsley, M J Russell and M J Tomlinson, "Towards an integrated discriminative network for automatic speech recognition" Proc. Institute of Acoustics autumn conf., 1982, pp C1.1-C1.5.\*

**1981**

80. M J Russell, "Automorphisms of postliminal C\*-algebras", PhD Thesis, University of Hull, 1981.

**1980**

81. M J Russell, "Automorphisms and derivations of continuous trace C\*-algebras", J. London Mathematical Society (2), vol 22, 1980, pp 139-145.