

P. C. Ching 程伯中

Publications in International Journals and Conference Proceedings :

A. Refereed Journal Publications

1. Feng Tian, Xiang-Gen Xia, **P.C. Ching**, Wing-Kin Ma, "Signal Detection in a Space-Frequency Coded Cooperative Communication System with Multiple Carrier Frequency Offsets by Exploiting Specific Properties of the Code Structure", IEEE Transactions on Vehicular Technology, Volume 58, No. 7, September 2009, pp 3396-3409
2. Wei Zhang, Yabo Li, Xiang-Gen Xia, **P.C. Ching**, Khaled Ben Letaief, "Distributed Space-Frequency Coding for Cooperative Diversity in Broadband Wireless Ad Hoc Networks", IEEE Transactions on Wireless Communications, Volume 7, Issue 3, March 2008, pp. 995-1003
3. Nengheng Zheng, Tan Lee, Ning Wang, **P.C. Ching**, "Integrating Complementary Features from Vocal Source and Vocal Tract for Speaker Identification", International Journal of Computational Linguistics & Chinese Language Processing, Volume 12, No. 3, September 2007, pp. 273-290
4. Wei Zhang, Xiang-Gen Xia, **Ching, P.C.**, "Full-Diversity and Fast ML Decoding Properties of General Orthogonal Space-Time Block Codes for MIMO-OFDM Systems", IEEE Transactions on Wireless Communications, Volume 6, Issue 5, May 2007, pp. 647-653
5. Nengheng Zheng; Tan Lee, **P.C. Ching**, "Integration of Complementary Acoustic Features for Speaker Recognition", IEEE Signal Processing Letters, Volume 14, Issue 3, March 2007, pp. 181-184
6. Shan Ouyang, Tan Lee, **P.C. Ching**, "A power-based adaptive method for eigenanalysis without square-root operations", Digital Signal Processing, Volume 17, Issue 1, January 2007, pp. 209-224
7. Zhang, W., Xia, X.G., **Ching, P. C.**, "High-Rate Full-Diversity Space-Time-Frequency Codes for Broadband MIMO Block-Fading Channels", IEEE Transactions on Communications, Volume 55, Issue 1, Jan. 2007, pp. 25-34
8. Wei Zhang; Xiang-Gen Xia; **P.C. Ching**, "Clustered pilot tones for carrier frequency offset estimation in OFDM systems", IEEE Transactions on Wireless Communications, Volume 6, Issue 1, Jan. 2007, pp 101-109
9. Zhang, W., Xia, X. G., **Ching, P. C.**, "Optimal Training and Pilot Pattern Design for OFDM Systems in Rayleigh Fading", IEEE Transactions on Broadcasting, Volume 52, Issue 4, Dec. 2006, pp. 505-514
10. Meng Yuan, Tan Lee, **P.C. Ching**, Yu Zhu, "Speech recognition on DSP: issues on computational efficiency and performance analysis", Microprocessors and Microsystems. Vol. 30, Issue 3, May 2006, pp 155-164
11. Yiu-Tong Chan, Herman Yau, **P.C. Ching**, "Exact and Approximate Maximum Likelihood Localization Algorithms", IEEE Trans. on Vehicular Technology, Vol. 55, No. 1, Jan. 2006, pp 10-16
12. Yiu-Tong Chan, Wing-Yue Tsui, Hing-Cheung So, **P.C. Ching**, "Time-of-Arrival Based Localization under NLOS Conditions", IEEE Trans. on Vehicular Technology, Vol. 55, No. 1, Jan. 2006, pp 17-24
13. Hong Zhang, Xiang-Gen Xia, Leonard Cimini, Jr., **P.C. Ching**, "Synchronization Techniques and Guard-Band Configuration Scheme for Single-Antenna Vector-OFDM

- Systems”, IEEE Trans. on Wireless Communications, Vol. 4, No. 5, September 2005, pp 2454-2464
14. W.K. Ma, **P.C. Ching**, Ba Ngu Vo, “Crosstalk Resilient Interference Cancellation in Microphone Arrays Using Capon Beamforming”, IEEE Trans. on Speech and Audio Processing, Vol. 12, No. 5, September 2004, pp. 468-477
 15. H.C. So, **P.C. Ching**, “Adaptive algorithm for direct frequency estimation”, IEE Proceedings – Radar, Sonar and Navigation, Vol. 151, No. 6, December 2004, pp. 359-364
 16. W.K. Ma, **P.C. Ching**, Zhi Ding, “Semidefinite Relaxation Based Multiuser Detection for M-ary PSK Multiuser Systems”, IEEE Trans. on Signal Processing, Vol. 52, No.10, October 2004, pp. 2862-2872
 17. W.K. Ma, Timothy N. Davidson, Kon Max Wong, **P.C. Ching**, “A Block Alternating Likelihood Maximization Approach to Multiuser Detection”, IEEE Trans. on Signal Processing, Vol. 52, No. 9, September 2004, pp. 2600-2611
 18. W. K. Lo, Helen M. Meng, **P.C. Ching**, “Multi-Scale Document Retrieval for Cantonese Broadcast News”, International Journal of Speech Technology, Vol. 7, 2004, pp. 203-219
 19. Lee Tan, Helen M. Meng, W.K. Lo, **P.C. Ching**, “The State-of-the-Art in Human-computer Speech-based Interface Technologies”, The HKIE Transactions, Vol. 10, No. 4, October 2003, pp. 50-61
 20. Y. Wu, H.C. So, **P.C. Ching**, “Joint Time Delay and Frequency Estimation via State-Space Realization”, IEEE Signal Processing Letters, Vol. 10, No. 11, November 2003, pp 339-342
 21. W.K. Ma, **P.C. Ching**, “Asymptotic Minimum Bit Error Rate Property of Maximum-Likelihood Multiuser Detection”, IEEE Communications Letters, Vol. 7, No. 9, September 2003, pp. 425-427
 22. W.K. Lo, Helen Meng, **P.C. Ching**, “Cross-Language Spoken Document Retrieval Using HMM-based Retrieval Model with Multi-Scale Fusion”, ACM Transactions on Asian Language Information Processing, Vol. 2, No. 1, March 2003, pp. 1-26”
 23. Shan Ouyang, **P.C. Ching**, Tan Lee, “Quasi-Newton algorithm for adaptive minor component extraction”, Electronics Letters, 12th September 2002, vol. 38, No. 19, pp. 1142-1144
 24. W. K. Ma, Timothy N. Davidson, Kon Max Wong, Zhi-Quan Luo, **P.C. Ching**, “Quasi-Maximum-Likelihood Multiuser Detection using Semi-Definite Relaxation with Application to Synchronous CDMA”, IEEE Trans. on Signal Processing, Vol. 50, No. 4, April 2002, pp. 912-922
 25. Tan Lee, Wai Lau, Y.W. Wong, **P.C. Ching**, “Using Tone Information in Cantonese Continuous Speech Recognition”, ACM Transactions on Asian Language Information Processing, Vol. 1, No. 1, March 2002, pp 83-102
 26. Ge Gao, **P.C. Ching**, Tan Lee, “A new approach to generating Pitch Cycle Waveform (PCW) for Waveform Interpolation codec”, Microprocessors and Microsystems, Elsevier Science B.V., Vo. 25, Feb. 2002, pp. 421-426
 27. Tan Lee, W.K. Lo, **P.C. Ching**, Helen Meng, “Spoken language resources for Cantonese speech processing”, Speech Communication, Elsevier Science B.V., Vol. 36, Feb. 2002, pp. 327-342
 28. W. K. Ma, Kon Max Wong, **P.C. Ching**, “On Computing Verdu’s Upper Bound for a Class of Maximum Likelihood Multiuser Detection and Sequence Detection Problems”, IEEE Trans. on Information Theory, vol. 47, No.7, November 2001, pp. 3049-3053

29. C.P. Chan, **P.C. Ching**, Tan Lee, "Noisy speech recognition using de-noised MRA acoustic features", *Journal of Acoustical Society of America*, Vol. 110, No. 5, Pt 1, Nov. 2001, pp. 2567-2574
30. Shan Ouyang, Zhang Bao, Gui-Sheng Liao, **P.C. Ching**, "Adaptive Minor Component Extraction with Modular Structure", *IEEE Trans. on Signal Processing*, Vol. 49, No. 9, September 2001, pp. 2127-2137
31. H.C. So, **P.C. Ching**, "Comparative study of five LMS-based adaptive time delay estimators", *IEE Proceedings – Radar, Sonar and Navigation*, Vol. 148, No. 1, February 2001, pp. 9-15
32. B.Vo, N. Ma, **P.C. Ching**, K.M. Wong, "Tracking moving speech source using cyclic adaptive beamforming", *Electronics Letters*, Vol. 36, No. 19, September 2000, pp. 1666-1668
33. K.M. Wong, J. Wu, T.N. Davidson, Q. Jin, **P.C. Ching**, "Performance of Wavelet Packet Division Multiplexing in Impulsive and Gaussian Noise", *IEEE Trans. on Communications*, Vol. 48, No. 7, July 2000, pp. 1083-1086
34. **P.C. Ching**, H.C. So, S.Q. Wu, "On Wavelet Denoising and its Applications to Time Delay Estimation", *IEEE Trans. on Signal Processing*, Vol. 47, No. 10, October 1999, pp. 2879-2882
35. X.X. Niu, **P.C. Ching**, Y.T. Chan, "Wavelet Based Approach for Joint time Delay and Doppler Stretch Measurements", *IEEE Trans. on Aerospace and Electronic Systems*, Vol. 35, No. 3, July 1999, pp. 1111-1119
36. H.C. So, Y.T. Chan, Q. Ma, **P.C. Ching**, "Comparison of Various Periodograms for Sinusoidal Detection and Frequency Estimation", *IEEE Trans. on Aerospace and Electronic Systems*, Vol. 35, No. 3, July 1999, pp. 945-952
37. T.Lee, **P.C.Ching**, "Cantonese Syllable Recognition Using Neural Networks", *IEEE Transactions on Speech and Audio Processing*, Vol. 7, No. 4, July 1999, pp. 466-472
38. J. Zhang, K.M. Wong, Z.Q. Luo, **P.C. Ching**, "Blind Adaptive FRESH Filtering for Signal Extraction", *IEEE Trans. on Signal Processing*, Vol. 47, No. 5, May 1999, pp. 1397-1402
39. Y.T. Chan, H.C. So, **P.C. Ching**, "Approximate Maximum Likelihood Delay Estimation via Orthogonal Wavelet Transform", *IEEE Trans. on Signal Processing*, Vol. 47, No. 4, April 1999, pp. 1193-1198
40. H.C. So, **P.C.Ching**, "Performance Analysis of ETDGE – an Efficient and Unbiased TDOA Estimator", *IEE Proceedings – Radar, Sonar and Navigation*, Vol. 145, No. 6, December 1998, pp. 325-330
41. Y.P.Zhang, Y.Hwang, **P.C.Ching**, "Wide-band UHF Radio propagation Characteristics in a Tunnel environment", *Journal of Wireless Personal Communications*, Vo. 8, 1998, pp. 291-299
42. **P.C. Ching**, S.Q. Wu, "On Approximated Sampling Theorem and Wavelet Denoising for Arbitrary Waveform Restoration", *Special Issue on Multirate Systems, Filter Banks, Wavelets and Application*, *IEEE Transactions on Circuits and Systems II*, Vol. 45, No. 8, August 1998, pp. 1102-1106
43. Tan Lee, **P.C. Ching**, L.W. Chan, "Isolated Word Recognition Using Modular Recurrent Neural Networks", *Pattern Recognition*, Vol. 31, No. 6, June 1998, pp. 751-760
44. K.F.Wan, **P.C.Ching**, C.K.Li, "A Set of Split-Matrix Ordered Walsh Functions", *Journal of Circuits, Systems, and Computers*, Vol. 7, No. 6, Dec. 1997, pp. 537-542
45. W.K. Lai, **P.C. Ching**, "A Novel Blind Estimation Algorithm", *IEEE Transactions on Signal Processing*, Vol. 45, No. 7, July 1997, pp. 1763-1769

46. H.C.So, **P.C. Ching**, "Convergence Dynamics of an Adaptive Time Delay Estimator in Multipath Channel", IEEE Transactions on Aerospace and Electronic Systems, Vol. 33, N. 3, July 1997, pp. 1071-1076
47. K.F. Wan, **P.C. Ching**, "Multi-level Split-path Adaptive Filtering and its Unification with Discrete Walsh Transform Adaptation", IEEE Transactions on Circuits & Systems, Part II : Analog & Digital Signal Processing, Vol. 44, No. 2, Feb. 1997, pp. 147-151
48. K.F. Wan, **P.C. Ching**, "A Fast response Split-path Median LMS Algorithm", IEEE Transactions on Circuits & Systems, Part II: Analog & Digital Signal Processing, Vol. 43, No. 4, April 1996, pp. 344-346
49. K.M. Chiu, **P.C. Ching**, "Quad-band Excitation for Low Bit Rate Speech Coding", Journal of Acoustics Society of America, Vol. 99 (4), Pt. 1, April 1996, pp. 2365-2369
50. K.C. Ho, **P.C. Ching**, "Split Filter Structures for LMS Adaptive Filtering", Signal Processing, Vol. 46, Nov. 1995, pp. 255-266
51. **P.C. Ching**, K.F. Wan, "Generalized Split Structure Adaptive Algorithm", Electronics Letters, Vol. 31, No. 24, Nov. 1995, pp. 2084-2085
52. Tan Lee, **P.C.Ching**, L.W.Chan, Y.H.Cheng, B.Mak, "Tone Recognition of Isolated Cantonese Syllables", IEEE Transactions on Speech and Audio Processing, Vol. 3, No. May, 1995, pp. 204-209
53. **P.C.Ching**, H.C.So, "Two Adaptive Algorithms for Multipath Time Delay Estimation", IEEE Journal of Oceanic Engineering, Vol. 10, No. 3, July 1994, pp. 458-463
54. H.C.So, **P.C.Ching**, Y.T.Chan, "A New Algorithm for Explicit Adaptation of Time Delay", IEEE Transactions on Signal Processing, Vol. 42, No.7, July 1994, pp. 1816-1820
55. **P.C.Ching**, Y.H.Cheng, M.H.Ko, "An In-Circuit Emulator for TMS320C25", IEEE Transactions on Education, Vol. 37, No.1, Feb. 1994, pp. 51-56
56. K.C.Ho, Y.T.Chan, **P.C.Ching**, "Adaptive Time Delay Estimation in Nonstationary Signal and/or Noise Power Environment", IEEE Transactions on Signal Processing, Vol. 41, No. 7, July 1993, pp. 2289-2299
57. **P.C.Ching**, K.C.Ho, "Statistical Performance Analysis of a Fast Stochastic Gradient for Constrained Adaptive Time Delay Estimation", Circuits, Systems and Signal Processing, Vol. 12, No. 3, 1993, pp. 453-464
58. H.C.So, **P.C.Ching**, "Target Localization in the Presence of Multipaths", Electronics Letters, Vol. 29, No. 3, Feb. 1993, pp. 293-294
59. K.F.Wan, **P.C.Ching**, K.C.Ho, "DWT Domain Split-Path Structure LMS Adaptive Filter", Electronics Letters, Vol. 28, No. 20, Sept. 1992, pp. 1929-1930
60. K.C.Ho, **P.C.Ching**, Y.T.Chan, "New Configuration for Convergence Speed Up in Adaptive Time Delay Estimation", IEEE Transactions on Signal Processing, Vol. 40, No. 11, November, 1992, pp. 2683-2691
61. K.C.Ho, **P.C.Ching**, "Performance Analysis of a Split-Path LMS Adaptive Filter for AR Modeling", IEEE Transactions on Signal Processing, Vol. 40, No. 6, June, 1992, pp. 1375-1382
62. **P.C.Ching**, Y.T.Chan, K.C.Ho, "Constrained Adaptation for Time Delay Estimation with a Multipath", IEE Proceedings Part F, Radar and Signal Processing, Vol. 138, No. 5, October 1991, pp. 453-458
63. C.K.Yu, **P.C.Ching**, "A Probability Decision Criterion for Speech Recognition", Computer Speech & Languages, Vol. 5, 1991, pp. 11-17
64. **P.C.Ching**, K.C.Ho, "A Split Structure for Adaptive Line Enhancer", International Journal of Electronics, Vol. 70, No. 3, 1991, pp. 565-571

65. K.C.Ho, **P.C.Ching**, "A New Constrained Least-Mean-Square Time Delay Estimation System", IEEE Trans. on Circuits and Systems, Vol. 37, No. 8, August, 1990, pp. 1060-1064 (Also appeared in Coherence & Time Delay Estimation edited by G.C. Carter, IEEE Press, 1993, pp. 277-281)
66. **P.C.Ching**, S.W.Wu, "A Real Time Digital Signal Processing System Using Parallel Processing Architecture", Microprocessors & Microcomputers, Dec., 1989, pp. 653-658
67. **P.C.Ching**, Y.T.Chan, "Adaptive Time Delay Estimation with Constraints", IEEE Transactions on Acoustic, Speech and Signal Processing, Vol. ASSP-36, No.4, April 1988, pp. 599-602
68. W.M.Lai, **P.C.Ching**, Y.T.Chan, "Discrete Word Recognition Using Energy-Time Profiles", International Journal of Electronics, Vol. 63, No. 6, 1987, pp. 857-865
69. Y.H.Tam, **P.C.Ching**, Y.T.Chan, "Adaptive recursive filters in cascade form", IEE Proceedings, Vol. 134, Pt. F, No. 3, Special Issue on Adaptive Filters, June 1987, pp. 245-252
70. Y.T.Chan, **P.C.Ching**, W.M.Lai, "A Microcomputer-based, Speaker-independent, Isolated Word Recognition System", Microcomputer Applications, Vol. 6, No. 1, 1987, pp. 25-28
71. **P.C.Ching**, W.M.Lai, "Time-encoded Deltamodulation of Speech Signals", Microcomputer Applications, Vol. 6, No. 1, 1987, pp. 20-24
72. Y.H.Tam, **P.C.Ching**, "Sequential adaptation of recursive digital filters in cascade form", International Journal of Electronics, Vol. 61, No. 4, 1986, pp. 441-448
73. **P.C.Ching**, Y.H.Tam, "An algorithm for simultaneous transmission of speech and data", International Journal of Electronics, Vol. 61, No. 2, 1986, pp. 239-245
74. **P.C.Ching**, C.C.Goodyear, "Walsh Transform Coding of the Speech Residual in RELP Coders", IEE Proceedings Vol. 131, Pt. G, No. 1, Feb., 1984, pp. 29-34
75. **P.C.Ching**, "A Study of Time Encoded Speech", Journal of the Institution of Radio & Electronic Engineers, Vol. 53, No. 9, Sept., 1983, pp. 321-324
76. **P.C.Ching**, C.C.Goodyear, "Adaptive cascade filter for speech analysis", IEE Proceedings Vol. 130, Pt. E, No. 1, Jan. 1983, pp. 11-18
77. **P.C.Ching**, C.C.Goodyear, "L.M.S. algorithm for sequentially adapting all-zero filters in modified cascade form", Electronics Letters, Vol. 16, No. 7, 1980, pp. 270-271

B. Refereed Conference Papers

1. Houwei Cao, **P.C. Ching** and Tan Lee, "Effects of language mixing for automatic recognition of Cantonese-English code-mixing utterances", The 10th Annual Conference of the International Speech Communication Association (Interspeech 2009), September 6-10, 2009, Brighton, UK, pp. 3011-3014
2. Ning Wang, **P.C. Ching** and Tan Lee, "Exploration of vocal excitation modulation features for speaker recognition", The 10th Annual Conference of the International Speech Communication Association (Interspeech 2009), September 6-10, 2009, Brighton, UK, pp. 892-895

3. Feng Tian, Xiang-Gen Xia, Wing-Kin Ma, **P.C. Ching**, “Full Diversity under Multiple Carrier Frequency Offsets of a Family of Space-Frequency Codes”, ICASSP 2009 – IEEE International Conference on Acoustics, Speech, and Signal Processing , April 19-24, 2009, Taipei, Taiwan, pp. 2733-2736
4. Wentao Gu, Tan Lee, **P.C. Ching**, “Prosodic Variation in Cantonese-English Code-Mixed Speech”, Proc. of the International Symposium on Chinese Spoken Language Processing, Dec 16-19, 2008 Kunming, China, pp. 342-345
5. S.W. Lee, Frank K. Soong, **P.C. Ching**, Tan Lee, “Pitch Tracking for Model-based Speech Separation”, Proc. of the International Symposium on Chinese Spoken Language Processing, Dec 16-19, 2008 Kunming, China, pp. 145-148
6. Nengheng Zheng, Xia Li, Houwei Cao, Tan Lee, **P.C. Ching**, “Deriving MFCC Parameters from the Dynamic Spectrum for Robust Speech Recognition”, Proc. of the International Symposium on Chinese Spoken Language Processing, Dec 16-19, 2008 Kunming, China, pp. 85-88
7. Yu Ting Yeung, Houwei Cao, N.H. Zheng, Tan Lee, **P.C. Ching**, “Language Modeling for Speech Recognition of Spoken Cantonese”, Proc. of INTERSPEECH 2008, September 22-26, 2008, Brisbane, Australia, pp. 1570-1573
8. Feng Tian, Xiang-Gen Xia, **P.C. Ching**, “Signal Detection in a Cooperative Communication System with Multiple CFOs by Exploiting the Properties of Space-Frequency Codes”, 2008 IEEE International Conference on Communications, May 19-23, Beijing, China
9. Feng Tian, **P.C. Ching**, Xiang-Gen Xia, “A Simple ICI Mitigation Method for a Space-Frequency Coded Cooperative Communication System with Multiple CFO”, ICASSP 2008 – IEEE International Conference on Acoustics, Speech, and Signal Processing , March 30-April 4, 2008, Las Vegas, USA, pp. 3253-3256
10. Ning Wang, **P.C. Ching**, N.H. Zheng, Tan Lee, “Robust Speaker Recognition Using Both Vocal Source and Vocal Tract Features Estimated from Noisy Input Utterances”, The 7th IEEE International Symposium on Signal Processing and Information Technology, December 15-18, 2007, Cairo, Egypt
11. Houwei Cao, Tan Lee, **P.C. Ching**, “A Study of Pronunciation Variation in Cantonese-English Code-Mixing Speech”, Oriental-COCOSDA 2007 – International Conference on Speech Database and Speech I/O System Assessment, Dec 4-6, 2007, Hanoi, Vietnam
12. S.W. Lee, Frank K. Soong, **P.C. Ching**, “Model-based Speech Separation with Single-microphone Input”, Proc. of INTERSPEECH 2007 – the International Conference on Spoken Language Processing, August 27-31, Antwerp, Belgium, 2007, pp. 850-853
13. Feng Tian, Xiang-Gen Xia, **P.C. Ching**, “Equalization in Space-Frequency Coded Cooperative Communication System with Multiple Carrier Frequency Offsets”, Proc. IEEE International Symposium on Signals, Circuits & Systems, July 12-13, 2007, Iasi, Romania, pp. 1222-1226
14. Wei Zhang, Yabo Li, Xiang-Gen Xia, **P.C. Ching**, Khaled Ben Letaief, “Distributed Space-Frequency Coding in Broadband Ad Hoc Networks”, ICASSP 2007 – IEEE International Conference on Acoustics, Speech, and Signal Processing , April 13-17, 2007, Hawaii, USA, pp. III. 489-492
15. Jing Zhang, **P.C. Ching**, “Blind Separation of Moving Speech Sources Using Short-Time LOD based ICA Method”, ICASSP 2007 – IEEE International Conference on Acoustics, Speech, and Signal Processing , April 13-17, 2007, Hawaii, USA, pp. III. 957-960

16. Yejun He, **P.C. Ching**, “Performance Evaluation of Adaptive Two-Dimensional Turbo Product Codes Composed of Hamming Codes”, Proc. IEEE International Conference on Integration Technology, March 20-24, 2007, Shenzhen, China, pp. 103-107
17. Feng Tian, Xiang-Gen Xia, **P.C. Ching**, “Signal Detection for Space-Frequency Coded Cooperative Communication System with Multiple Carrier Frequency Offsets”, Proc. IEEE Wireless Communications & Networking Conference, March 11-15, 2007, Hong Kong, pp. 1222-1226
18. Nengheng Zheng, Ning Wang, Tan Lee, **P.C. Ching**, “Speaker Verification Using Complementary Information from Vocal Source and Vocal Tract”, Proc. of the International Symposium on Chinese Spoken Language Processing, Dec 13-15, 2006 Singapore, pp. 518-528
19. Nengheng Zheng, **P.C. Ching**, Ning Wang, Tan Lee, “Integrating Complementary Features with a Confidence Measure for Speaker Identification”, Proc. of the International Symposium on Chinese Spoken Language Processing, Dec 13-15, 2006 Singapore, pp. 549-557
20. Houwei Cao, **P.C. Ching**, Tan Lee, Ning Wang, “An Extended Cantonese-English Code-Mixing Speech Corpus: exCUMIX”, Oriental-COCOSDA 2006 – International Conference on Speech Database and Assessment, Dec 9-11, 2006, Malaysia, pp. 1-5
21. Wei Zhang, Yabo Li, Xiang-Gen Xia, **P.C. Ching**, Khaled Ben Letaief, “Distributed Space-Frequency Coding for Cooperative Broadband Wireless Networks”, Military Communications Conference, Oct. 23-25, 2006, Washington DC, USA
22. S.W. Lee, Frank K. Soong, **P.C. Ching**, “An Iterative Trajectory regeneration Algorithm for Separating Mixed Speech Sources”, ICASSP 2006 – IEEE International Conference on Acoustics, Speech, and Signal Processing, May 14-19, 2006, Toulouse, France, pp. I. 157-160
23. Wing-Kin Ma, Chong-Yung Chi, **P.C. Ching**, “Extended Differential Unitary Space-Time Modulation: A Non-Coherent Scheme With Error Penalty Less Than 3DB”, ICASSP 2006 – IEEE International Conference on Acoustics, Speech, and Signal Processing, May 14-19, 2006, Toulouse, France, pp. IV. 529-532
24. Z. Wang, **P.C. Ching**, “Constrained Least Squares Estimation For Position Tracking”, ICASSP 2006 – IEEE International Conference on Acoustics, Speech, and Signal Processing, May 14-19, 2006, Toulouse, France, pp. IV. 517-520
25. Wei Zhang, Xiang-Gen Xia, **P.C. Ching**, “Design of Orthogonal Space-Time Block Codes For MIMO-OFDM Systems with Full Diversity and Fast ML Decoding”, ICASSP 2006 – IEEE International Conference on Acoustics, Speech, and Signal Processing, May 14-19, 2006, Toulouse, France, pp. IV. 169-172
26. Wei Zhang, Xiang-Gen Xia, **P.C. Ching**, “High-Rate Full-Diversity Space-Time-Frequency Codes for MIMO Multipath Block-Fading Channels”, IEEE GLOBECOM 2005 – IEEE Global Telecommunications Conference, Nov 28-Dec 2, 2005, St. Louis, MO, pp. 1587-1591
27. Nengheng Zheng, Chao Qin, Tan Lee, **P.C. Ching**, “CU2C: A Dual-condition Cantonese Speech Database for Speaker Recognition Applications”, Oriental-COCOSDA 2005 – International Conference on Speech Databases and Assessment, Dec 6-8, 2005, Jakarta, Indonesia, pp. 67-72
28. S.W. Lee, Frank K. Soong, **P.C. Ching**, “Harmonic Filtering for Joint Estimation of Pitch and Voiced Source with Single-microphone Input”, Proc. of INTERSPEECH 2005 – the International Conference on Spoken Language Processing, Sept 4-8, 2005, Lisbon, Portugal, pp. 309-312

29. Joyce Y.C. Chan, **P.C. Ching**, Tan Lee, "Department of a Cantonese-English Code-mixing Speech Corpus", Proc. of INTERSPEECH 2005 – the International Conference on Spoken Language Processing, Sept 4-8, 2005, Lisbon, Portugal, pp. 1533-1536
30. Nengheng Zheng, Tan Lee, **P.C. Ching**, "Comparative Analysis of Discrimination Power of the Vocal Source and Vocal Tract Features for Speaker Verification" 聲學技術 (Technical Acoustics) – 第八屆全國人語機音通訊學術會議論文集, Vol.24, Oct 22-24, Beijing, China, pp. 210-213
31. Wei Zhang, Xiang-Gen Xia, **P.C. Ching**, "Universal Space-Frequency Block Coding for MIMO-OFDM Systems", APCC 2005 – Asia-Pacific Conference on Communications, Oct 3-5, 2005, Perth, Western Australia, pp.227-231
32. Y.T. Chan, L.S.Y. Tao, **P.C. Ching**, "Approximate Maximum Likelihood Localization by AoA Measurements and NLOS Detection", International Conference on Wireless Communications, July 11-13, 2005, Alberta, Canada, pp. 233-246
33. Wei Zhang, Xiang-Gen Xia, **P.C. Ching**, "Achieving High-Diversity in MB-OFDM Systems", International Conference on Wireless Networks, Communications and Mobile Computing, June 13-16, 2005, Hawaii, USA
34. Wei Zhang, Xiang-Gen Xia, **P.C. Ching**, Haiquan Wang, "Rate Two Full-diversity Space-frequency Code Design For MIMO-OFDM", SPAWC2005 – IEEE International Workshop on Signal Processing Advances for Wireless Communications, June 5-8, 2005, New York, USA
35. Meng Yuan, Tan Lee, **P.C. Ching**, "Speech Recognition on DSP: Issues on Computational Efficiency and Performance Analysis", International Conference on Communications, Circuits and Systems Proceedings, May 27-30, 2005, Hong Kong, China, pp. 852-856
36. Joyce Y.C. Chan, **P.C. Ching**, Tan Lee, Helen M. Meng, "Detection of Language Boundary in Code-Switching Utterances by Bi-Phone Probabilities", Proc. of the International Symposium on Chinese Spoken Language Processing, Dec 15-18, 2004 Hong Kong, China, pp. 293-296
37. S.W. Lee, **P.C. Ching**, "In-Phase Induction: an Effective Compensation Technique for Robust Speech Recognition", Proc. of INTERSPEECH 2004 - the International Conference on Spoken Language Processing, October 4-8, 2004, Korea
38. Nengheng Zheng, **P.C. Ching**, Tan Lee, "Time-Frequency Analysis of Vocal Source Signal for Speaker Recognition", Proc. of INTERSPEECH 2004 - the International Conference on Spoken Language Processing, October 4-8, 2004, Korea
39. Wei Zhang, Xiang-Gen Xia, **P.C. Ching**, "A Design of High-rate Space-Frequency Codes for MIMO-OFDM Systems", IEEE GLOBECOM 2004 – IEEE Global Telecommunications Conference, Nov 29-Dec 3, 2004, Dallas, Texas
40. Wei Zhang, Xiang-Gen Xia, **P.C. Ching**, "Clustered Pilot Tones For Carrier Frequency Offset Compensation in OFDM Systems", EUSIPCO 2004 – European Signal Processing Conference, Sept 6-10, 2004, Vienna, Austria, pp. 901-904
41. Wei Zhang, X.G. Xia, **P.C. Ching**, "On Pilot Pattern Design for PSAM-OFDM System", Proc. IEEE International Symposium on Circuits and Systems, May 23-26 2004, Vancouver, Canada, Vol. V, pp. 417-420
42. S.W. Lee, **P.C. Ching**, Tan Lee, "Noise-Robust Automatic Speech Recognition Using Mainlobe-Resilient Time-Frequency Quartile-based Noise Estimation", Proc. IEEE International Symposium on Circuits and Systems, May 23-26 2004, Vancouver, Canada, Vol. III, pp. 425-428
43. L.Y. Ngan, Shan Ouyang, **P.C. Ching**, "Reduced Rank Blind Adaptive Frequency-Shift Filtering for Signal Extraction", Proc. of the IEEE International Conference on

- Acoustics, Speech and Signal Processing, May 17-21, 2004, Montreal, Canada, pp. II.653-657
44. Wei Zhang, X.G. Xia, **P.C. Ching**, W.K. Ma, "On The Number of Pilots for OFDM System in Multipath Fading Channels", Proc. of the IEEE International Conference on Acoustics, Speech and Signal Processing, May 17-21, 2004, Montreal, Canada, pp. IV.381-384
 45. Nengheng Zheng, **P.C. Ching**, "Using Haar Transformed Vocal Source Information for Automatic Speaker Recognition", Proc. of the IEEE International Conference on Acoustics, Speech and Signal Processing, May 17-21, 2004, Montreal, Canada, pp. I.77-80
 46. W.K. Ma, **P.C. Ching**, T.N. Davidson, B.N. Vo, "Blind Symbol Identifiability of Orthogonal Space-Time Block Codes", Proc. of the IEEE International Conference on Acoustics, Speech and Signal Processing, May 17-21, 2004, Montreal, Canada, pp. IV.821-824
 47. Helen M. Meng, Yuk-chi Li, Tien-Ying Fung, Kon-Fan Low, Ka-Fai Chow, Tin-Hang Lo, Man-Cheuk Ho, **P.C. Ching**, "Bilingual Chinese/English Voice Browsing based on a VoiceXML Platform", Proc. of the IEEE International Conference on Acoustics, Speech and Signal Processing, May 17-21, 2004, Montreal, Canada, pp. III.769-772
 48. W. K. Ma, **P.C. Ching**, T.N. Davidson and X.G. Xia, "Blind Maximum-Likelihood Decoding for Orthogonal Space-Time Block Codes: A Semidefinite Relaxation Approach", Proc. of the 2003 GLOBECOM, December 1-5, 2003, San Francisco, USA, pp. 2094-2098
 49. Wei Han, Kwok-Wai Hon, Cheong-Fat Chan, Tan Lee, Chiu-Sing Choy, Kong-Pang Pun, **P.C. Ching**, "A Real-Time Chinese Speech Recognition IC with Double Mixtures", Proc. Of the 2003 International Conference on ASIC, Oct. 21-24, 2003, Beijing, China, pp. 926-929
 50. Helen M. Meng, Yuk-chi Li, Tien-ying Fung, Man-cheuk Ho, Chi Kin Keung, Tin-hang Lo, Wai Kit Lo and **P.C. Ching**, "Recent Enhancements in CU VOCAL for Chinese TTS-Enabled Applications", Proc. of the 8th European Conference on Speech Communication and Technology, September 1-4, 2003, Geneva, Switzerland, pp. 1253-1256
 51. W. K. Ma, **P.C. Ching** and Z. Ding, "Efficient Relaxed Maximum-Likelihood MPSK Multiuser Detection using Semidefinite Programming", Proc. of the 4th IEEE Workshop on Signal Processing Advances in Wireless Communications, June 15-18, 2003, Rome, Italy
 52. Helen M. Meng, Tin Hang Lo, Chi Kin Keung, Man Cheuk Ho, Wai Kit Lo and **P.C. Ching**, "CU VOCAL Web Service: A Text-to-Speech Synthesis Web Service for Voice-enabled Web-mediated Applications", Proc. Of the 12th International World Wide Web Conference, May 20-24, 2003, Budapest, Hungary
 53. Wei Han, Kwok-Wai Hon, Cheong-Fat Chan, Tan Lee, Chiu-Sing Choy, Kong-Pang Pun and **P.C. Ching**, "An HMM-Based Speech Recognition IC", Proc. IEEE International Symposium on Circuits and Systems, June 2003, Bangkok, Thailand, Vol. II, pp. 744-747
 54. L.Y. Ngan, Y. Wu, H.C. So, **P.C. Ching** and S.W. Lee, "Joint Time Delay and Pitch Estimation for Speaker Localization", Proc. IEEE International Symposium on Circuits and Systems, June 2003, Bangkok, Thailand, Vol. III, pp. 722-725
 55. Wing-kin Ma and **P.C. Ching**, "Robust Interference Suppression and Blind Speech Beamforming in Room Reverberant Environments", Proc. of the IEEE International

- Conference on Acoustics, Speech and Signal Processing, April 6-10, 2003, Hong Kong, pp. V.493-V.496
56. Helen M. Meng, **P.C. Ching**, Yee-fong Wong and Cheong-chat Chan, "ISIS: A Multi-Modal, Trilingual, Distributed Spoken Dialog System", Proc. of the International Conference on Spoken Language Processing, Sept. 16-20, 2002, Denver, USA, pp. 2561-2564
 57. Helen M. Meng, Chi-kin Keung, Kai-chung Siu, Tien-ying Fung and **P.C. Ching**, "CU Vocal: Corpus-based Syllable Concatenation for Chinese Speech Synthesis across Domains and Dialects" Proc. of the International Conference on Spoken Language Processing, Sept. 16-20, 2002, Denver, USA, pp. 2373-2376
 58. W. K. Lo, Helen M. Meng and **P.C. Ching**, "Multi-Scale and Multi-Model Integration for Improved Performance in Chinese Spoken Document Retrieval", Proc. of the International Conference on Spoken Language Processing, Sept. 16-20, 2002, Denver, USA, pp. 1513-1516
 59. Shan Ouyang and **P.C. Ching**, "A Unified Framework for Fast Extraction of Principal and Minor Components", Proc. of the XI European Signal Processing Conference, Sept. 3-6, 2002, Toulouse, France
 60. **P.C. Ching**, Shan Ouyang and Tan Lee, "A Quasi-Newton Algorithm for Minor Component Analysis and its Convergence", Proc. of the 4th IASTED International Conference on Signal and Image Processing, Aug. 12-14, 2002, Kaua'i, Hawaii, USA, pp. 92-97
 61. W. K. Ma, Timothy N. Davidson, Kon Max Wong and **P.C. Ching**, "Multiuser Detection for Asynchronous CDMA Using Block Coordinate Ascent and Semi-Definite Relaxation", Proc. of the IEEE International Conference on Acoustics, Speech and Signal Processing, May 13-17, 2002, Orlando, USA, pp. III.2309-2312
 62. Shan Ouyang and **P.C. Ching**, "Fast Algorithm for Adaptive Estimation of Principal and Minor Components", Proc. of the IEEE International Conference on Acoustics, Speech and Signal Processing, May 13-17, 2002, Orlando, USA, pp. I.1073-1076
 63. W.N. Choi, Y.W. Wong, Tan Lee and **P.C. Ching**, "Searching for the Missing Piece", Proc. of the IEEE Automatic Speech Recognition and Understanding Workshop, December 9-13, 2001, Trento, Italy
 64. Helen Meng, Yee Fong Wong, Cheong Chat Chan, Shuk Fong Chan, Chi Kin Keung, Kai Chung Siu, Tien Ying Fung, Wai Ching Tsui, Ke Chen, Lan Wang, Ting Yao Wu, Xiaolong Li, Tan Lee, Yiu Wing Wong, **P.C. Ching** and Huisheng Chi, "ISIS: A Trilingual Conversational System with Learning Capabilities and Combined Interaction and Delegation Dialogs", Proc. of the 6th National Conference on Man Machine Speech Communication, Shenzhen, China, November 20-22, 2001, pp. 119-124
 65. Patgi Kam, Carina Ngai, Tan Lee and **P.C. Ching**, "Speech-to-Speech Translation from mandarin to Cantonese", Proc. of the 6th National Conference on Man Machine Speech Communication, Shenzhen, China, November 20-22, 2001, pp. 139-144
 66. H.S. Lam, Tan Lee and **P.C. Ching**, "A low missing rate audio search technique for Cantonese radio broadcast recording", Advances in Multimedia Information Processing – PCM 2001, Springer, (Second IEEE Pacific Rim Conference on Multimedia, Beijing, China, October 2001), pp. 546-549
 67. Helen M. Meng, Shuk Fong Chan, Yee Fong Wong, Cheong Chat Chan, Yiu Wing Wong, Tien Ying Fung, Wai Ching Tsui, Ke Chen, Lan Wang, Ting Yao Wu, Xiaolong Li, Tan Lee, Wing Nin Choi, **P.C. Ching** and Huisheng Chi, "ISIS: A Learning System with Combined Interaction and Delegation Dialogs", Proc. of the 7th European

- Conference on Speech Communication and Technology, September 3-7, 2001, Aalborg, Denmark, Vol. 3, pp. 1551-1554
68. W.K. Lo, **P.C. Ching**, Tan Lee and Helen M. Meng, "Design, Compilation and Processing of CUCall: A Set of Cantonese Spoken language Corpora Collected Over Telephone Networks", Proc. of the Research on Computational Linguistics Conference XIV, August 16-17, 2001, Tainan, Taiwan, pp 193-212
 69. Thomas Wong, G.S. Liao, S.K. Cheung, M.D. Zoltowski, J. Ramos and **P.C. Ching**, "A 'self-decorrelating' technique to enhance blind space-time RAKE receivers with single-user-type DS-CDMA detectors", Proc. of the 3rd IEEE International Conference on Communications, June 11-14, 2001, Helsinki, Finland, pp. 1491-1495
 70. W.K. Ma, T.N. Davidson, K.M. Wong, Z.Q. Luo and **P.C. Ching**, "Efficient Quasi-Maximum-Likelihood Multiuser Detection by Semi-Definite Relaxation", Proc. of the 3rd IEEE International Conference on Communications, June 11-14, 2001, Helsinki, Finland, Vol. 1, pp. 6-10
 71. K.F. To, **P.C. Ching** and K.M. Wong, "Compensation of Amplifier Nonlinearities on Wavelet Packet Division Multiplexing", Proc. of the 2001 IEEE International Conference on Acoustics, Speech and Signal Processing, May 7-11, Salt Lake City, USA
 72. G. Liao, H.C. So, and **P.C. Ching**, "Joint Time Delay and Frequency Estimation of Multiple Sinusoids", Proc. of the 2001 IEEE International Conference on Acoustics, Speech and Signal Processing, May 7-11, Salt Lake City, USA
 73. W.K. Ma, T.N. Davidson, K.M. Wong, Z.Q. Luo and **P.C. Ching**, "An Efficient Quasi-Maximum-Likelihood Multiuser Detector using Semi-Definite Relaxation", Proc. of the 3rd IEEE Workshop on Signal Processing Advances in Wireless Communications, March 20-23, 2001, Taoyuan, Taiwan, pp. 186-189
 74. H.C. So, **P.C. Ching**, "Analysis of an Adaptive Single-Tone Frequency Estimation Algorithm", Proc. of the IASTED International Conference on Signal and Image Processing, Nov. 19-23, 2000, Las Vegas, USA, pp. 465-468
 75. W.N. Choi, Y.W. Wong, Tan Lee, **P.C. Ching**, "Lexical Tree Decoding with a Class-based Language Model for Chinese Speech Recognition, "" Proc. of the 6th International Conference on Spoken Language Processing, Oct. 16-20, 2000 Beijing, China, Vol. I, pp. 174-177
 76. Helen M. Meng, S.F. Chan, Y.F. Wong, T.Y. Fung, W.C. Tsui, T.H. Lo, C.C. Chan, K. Chen, L. Wang, T.Y. Wu, X. Li, Tan Lee, W.N. Choi, Y.W. Wong, **P.C. Ching**, H. Chi, "ISIS: A Multilingual Spoken Dialog System developed with CORBA and KQML agents"" Proc. of the 6th International Conference on Spoken Language Processing, Oct. 16-20, 2000 Beijing, China, Vol. II, pp. 150-153
 77. W. Lau, Tan Lee, Y.W. Wong, **P.C. Ching**, "Incorporating Tone Information into Chinese Large Vocabulary Continuous Speech Recognition, "" Proc. of the 6th International Conference on Spoken Language Processing, Oct. 16-20, 2000 Beijing, China, Vol. II, pp. 883-886
 78. Helen M. Meng, W.K. Lo, Y.C. Li, **P.C. Ching**, "Multi-scale Audio Indexing for Chinese Spoken Document Retrieval, "" Proc. of the 6th International Conference on Spoken Language Processing, Oct. 16-20, 2000 Beijing, China, Vol. IV, pp. 101-104
 79. W. Lau, Y.W. Wong, W.K. Lo, Tan Lee, **P.C. Ching**, "A Study on the Contribution of Lexical Tones in Chinese LVCSR, "" Proc. of the International Symposium on Chinese Spoken Language Processing, Oct. 13-15, 2000 Beijing, China, pp. 129-132
 80. W.K. Lo, Helen M. Meng, **P.C. Ching**, "Sub-syllable Acoustic Modeling across Chinese Dialects, "" Proc. of the International Symposium on Chinese Spoken Language Processing, Oct. 13-15, 2000 Beijing, China, pp. 97-100

81. Y.C. Li, W.K. Lo, Helen M. Meng, **P.C. Ching**, "Query Expansion using Phonetic Confusions for Chinese Spoken Document Retrieval," Proc. Of the 5th International Workshop on Information Retrieval with Asian Languages, Sept. 30 – Oct. 2, 2000, Hong Kong, China, pp. 89-93
82. Sheng Gao, Tan Lee, Y.W. Wong, Bo Xu, **P.C. Ching**, Taiyi Huang, "Acoustic Modeling for Chinese Speech recognition: A Comparative Study of Mandarin and Cantonese," Proc. of the 2000 IEEE International Conference on Acoustics, Speech and Signal Processing, June 5-9, 2000, Istanbul, Turkey, Vol. III, pp. 1261-1264
83. W.K. Ma, **P.C. Ching**, K.M. Wong, "Maximum Likelihood Detection for Multicarrier Systems Employing Non-Orthogonal Pulse Shapes", Proc. of the 2000 IEEE International Conference on Acoustics, Speech and Signal Processing, June 5-9, 2000, Istanbul, Turkey, Vol. V, pp. 2489-2492
84. B.N. Vo, Ning Ma, **P.C. Ching**, K.M. Wong, "Tracking a Moving Speech Source Using Cyclic Adaptive Beamforming", Proc. of the 2nd International Conference on Information, Communications and Signal Processing, December 7-10, 1999, Singapore, Paper 1E2.5
85. Y.W. Wong, K.F. Chow, W. Lau, W.K. Lo, Tan Lee, **P.C. Ching**, "Acoustic Modeling and Language Modeling for Cantonese LVCSR", Proc. of the 6th European Conference on Speech Communication and Technology, September 5-9, 1999, Budapest, Hungary, Vol. 3, pp. 1091-1094
86. Ge Gao, **P.C. Ching**, "A 1.7 kbps Waveform Interpolation Speech Coder Using Decomposition of Pitch Cycle Waveform", Proc. of the 6th European Conference on Speech Communication and Technology, September 5-9, 1999, Budapest, Hungary, Vol. 3, pp. 1439-1442
87. Tan Lee, Helen M. Meng, W. Lau, W.K. Lo, **P.C. Ching**, "Micro-prosodic Control in Cantonese Text-to-Speech Synthesis", Proc. of the 6th European Conference on Speech Communication and Technology, September 5-9, 1999, Budapest, Hungary, Vol. 4, pp. 1855-1858
88. W.K. Ma, K.M. Wong, **P.C. Ching**, "Performance Analysis of Maximum Likelihood Detector for Non-Orthogonal Multiuser Signals", Proc. of the 1999 2nd IEEE Workshop on Signal Processing Advances in Wireless Communications, May 9-12, 1999, Annapolis, USA, pp. 25-28
89. C.P. Chan, Y.W. Wong, Tan Lee, **P.C. Ching**, "Two-Dimensional Multi-Resolution Analysis of Speech Signals and its Application to Speech Recognition", Proc. of the 1999 IEEE International Conference on Acoustics, Speech and Signal Processing, March 15-19, 1999, Phoenix, USA, Vol. 1, pp. 405-408
90. Z.L. Yu, **P.C. Ching**, Z.B. Chen, "Articulatory Synthesis Evaluation of the Performance of Inverse Speech Solution for Formant Targeted Vowel-to-Vowel Transition", Proc. of the 1998 International Symposium on Chinese Spoken Language Processing, Nov. 6-9, 1998, Singapore, pp. 230-233
91. K.F. Chow, T. Lee, **P.C. Ching**, "Sub-syllable Acoustic Modeling for Cantonese Speech Recognition", Proc. of the 1998 International Symposium on Chinese Spoken Language Processing, Nov. 6-9, 1998, Singapore, pp. 75-79
92. W.K. Lo, T. Lee, **P.C. Ching**, "Development of Cantonese Spoken Language Corpora for Speech Applications", Proc. of the 1998 International Symposium on Chinese Spoken Language Processing, Nov. 6-9, 1998, Singapore, pp. 102-107
93. W.K.Lai, **P.C.Ching**, "A Novel Fourth Order Cumulant based DOA Estimator for Coherent Signals", Proc. of the 1998 ISATED International Conference on Signal and Image Processing, Oct. 28-31, 1998, Las Vegas, USA, pp. 285-289

94. Y.T.Chan, K.C.Ho, **P.C.Ching**, "Scaling and Filtering of a sampled Signal by the Continuous Wavelet Transform", Proc. of the 1998 IEEE International Symposium on Time-Frequency and Time-Scale Analysis, Oct. 7-9, 1998, Pittsburgh, USA, pp. 345-348
95. Zhongfu Ye, K.M.Wong, **P.C.Ching**, "A Novel Technique for the Blind Estimation of a Channel Matrix", Proc. of the 5th IEEE International Conference on Electronics, Circuits and Systems, Sept. 7-10, 1998, Lisboa, Portugal, pp 441-444
96. B.Vo, N. Ma, **P.C. Ching**, K.M. Wong, "Adaptive Beamforming for Speech Tracking", Proc. Of the 1998 Symposium in Image, Speech Signal Processing and Robotics, Sept. 3-4, 1998, Hong Kong, Vol. II, pp 59-63
97. B.Vo, **P.C. Ching**, K.M. Wong, "Blind Adaptive FRESH IIR Filters"", Proc. Of the 1998 Symposium in Image, Speech Signal Processing and Robotics, Sept. 3-4, 1998, Hong Kong, Vol. II, pp 33-37
98. W.K.Lai, **P.C.Ching**, "A New Approach for Coherent Direction-of-Arrival Estimation", Proc. of the 1998 IEEE International Symposium on Circuits and Systems, May 31- June 3, 1998, Monterey, USA, Vol. 5, pp. V.9-V.12
99. W.K.Lo, K.F.Chow, Tan Lee, **P.C.Ching**, "Cantonese Database developed at CUHK for Speech Processing", Proc. of the Conference on Phonetics of the Languages in China, May 28-30, 1998, Hong Kong, pp. 77-80
100. Min Chu, **P.C.Ching**, "A Hybrid Approach to Synthesize High Quality Cantonese Speech", Proc. of the 1998 IEEE International Conference on Acoustics, Speech and Signal Processing, May 12-15, 1998, Seattle, USA, Vol. 1, pp. 277-280
101. Z.L.Yu, **P.C.Ching**, "Articulatory Synthesis of Formant Targeted Sounds with Parameters Derived from the Inverse Solution of Speech Production", Proc. of the 1998 IEEE International Conference on Acoustics, Speech and Signal Processing, May 12-15, 1998, Seattle, USA, Vol. 2, pp. 889-892
102. Ning Ma, **P.C.Ching**, "Pitch Extraction by means of Wigner Distribution", Proc. of the International Symposium on Multimedia Information Processing, Dec. 11-13, 1997, Taiwan, pp.256-261
103. Min Chu and **P.C.Ching**, "A Cantonese Synthesizer based on TD-PSOLA Method", Proc. of the International Symposium on Multimedia Information Processing, Dec. 11-13, 1997, Taiwan, pp.262-267
104. **P.C.Ching**, S.Q.Wu, "Multiresolution Analysis for CT Images", Proc. of the 1997 IASTED International Conference on Signal and Image Processing, Dec. 4-6, 1997, New Orleans, USA, pp. 141-144
105. Ning Ma, **P.C.Ching**, "Better Visualization for Formant Analysis by means of Time-Frequency Distribution, "" Proc. of IEEE TENCON'97 on Speech and Image Technologies for Computing and Telecommunications, Dec. 2-4, 1997, Brisbane, Australia, pp. 39-42
106. Min Chu, Hongyan Si, Xuqing Tian, Shinan Lu, **P.C.Ching**, "Research on Perception of Formant Transition between Syllables in Chinese", Proc. of the Sixth Western Pacific Regional Acoustics Conference, Nov. 1997, Hong Kong, Vol. 1, pp. 94-99
107. Z.L.Yu, **P.C.Ching**, "Geometrically and Acoustically Optimized Codebook for Unique mapping from Formants to Vocal Tract Shape", Proc. of the 5th European Conference on Speech Communication and Technology, Sept. 22-25, 1997, Rhodes, Greece, Vol. 5, pp. 2551-2554
108. Y.P.Ng, L.W.Chan, **P.C.Ching**, "Automatic Recognition of Continuous Cantonese Speech with Very large Vocabulary", Proc. of the 5th European Conference on Speech Communication and Technology, Sept. 22-25, 1997, Rhodes, Greece, Vol. 3, pp. 1551-1554

109. H.C.So, Y.T.Chan, Q.Ma, **P.C.Ching**, "Comparison of Various Periodograms for Single Tone detection and Frequency Estimation", Proc. IEEE International Symposium on Circuits and Systems, June 9-12, 1997, Hong Kong, Vol. IV, pp. 2529-2532
110. Y.T.Chan, H.C.So, **P.C.Ching**, "Approximate Maximum-Likelihood Delay Estimation via Orthogonal Wavelet Transform", Proc. IEEE International Symposium on Circuits and Systems, June 9-12, 1997, Hong Kong, Vol. IV, pp. 2501-2504
111. X.X.Niu, **P.C.Ching**, S.Q.Wu, "Design of a Wideband Optimum signal for Time Delay and Doppler Stretch Measurements", Proc. IEEE International Symposium on Circuits and Systems, June 9-12, 1997, Hong Kong, Vol. IV, pp. 2533-252536
112. **P.C.Ching**, K.F.Chow, Tan Lee, Alfred Y.P.Ng and L.W.Chan, "Development of a Large Vocabulary Speech Database for Cantonese", Proc. IEEE International Conference on Acoustic, Speech & Signal Processing, April 21-24, 1997, Munich, Germany, Vol. III, pp. 1775-1778
113. Tan Lee, **P.C.Ching**, "A Neural Network based Speech Recognition System for Isolated Cantonese Syllables", Proc. IEEE Int. Conf. on Acoustic, Speech & Signal Processing, , April 21-24, 1997, Munich, Germany, Vol. IV, pp. 3269-3272
114. S.Q.Wu, H.C.So, **P.C.Ching**, "Improvement of TDOA Measurement using Wavelet Denoising with a Novel Thresholding Technique", Proc. IEEE Int. Conf. on Acoustic, Speech & Signal Processing, April 21-24, 1997, Munich, Germany, Vol. I, pp. 539-542
115. Alfred Y.P.Ng, Tan Lee, **P.C.Ching**, L.W.Chan, "Recent Advances in Cantonese Speech Recognition", (invited paper) Proc. of the International Symposium on Multi-Technology Information Processing, Dec. 16-18, 1996, Hsinchu, Taiwan, pp. 139-144
116. C.F.Chong, L.W.Chan, **P.C.Ching**, "Hierarchical Mixtures of experts for Phonetic Classification", Proceedings of the International Symposium on Multi-Technology Information Processing, Dec. 16-18, 1996, Hsinchu, Taiwan, pp. 461-466
117. **P.C.Ching**, S.Q.Wu, "Some Special Wavelets with Faster Algorithms", Proceedings of the IEEE Region 10 Conference on Digital Signal Processing Applications, Nov. 27-29, 1996, Perth, Australia, Vol. 2, pp. 502-507
118. X.X.Niu, **P.C.Ching**, "Accurate Time Delay and Doppler Stretch Estimation in Noisy Environment", Proceedings of the IEEE Region 10 Conference on Digital Signal Processing Applications, Nov. 27-29, 1996, Perth, Australia, Vol. 2, pp. 676-680
119. Y.P.Zhang, Y.Hwang, **P.C.Ching**, "Characterization of UHF Radio Propagation Channel in Curved Tunnels", Proceedings of the 7th IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, Oct. 15-18, 1996, Taipei, ROC, pp. 798-802
120. C.M.Wu, H.S.Lam, **P.C.Ching**, Tan Lee, "Liberal Conference: Real Time Online Voice Conference over Internet", Proc. of the International Conf. on Signal Processing Applications & Technology, Oct. 7-10, 1996, Boston, MA, USA, pp. 1692-1696
121. Tan Lee, **P.C.Ching**, "On Improving Discrimination Capability of an RNN based Recognizer", Proceedings of the Fourth International Conference on Spoken Language Processing, Oct. 3-6, 1996, Philadelphia, USA, Vol. 1, pp. 526-529
122. W.K.Lo, **P.C.Ching**, "Phone-based Speech Synthesis with Neural Network and Articulatory control", Proceedings of the Fourth International Conference on Spoken Language Processing, Oct. 3-6, 1996, Philadelphia, USA, Vol. 4, pp. 2227-2230
123. X.X.Niu, **P.C.Ching**, Y.T. Chan, "Performance Analysis of a Wavelet based WBCAF Method for Time Delay and Doppler Stretch Estimation", Proc. VIII European Signal Processing Conference, September 10-13, 1996, Trieste, Italy, Vol. I, pp. 248-251

124. W.K.Lai, **P.C.Ching**, "A Higher-Order Cumulant based DOA Estimation Algorithm", Proc. VIII European Signal Processing Conference, September 10-13, 1996, Trieste, Italy, Vol. II, pp1437-1440
125. H.C.So, **P.C.Ching**, "Analysis of an Adaptive IIR Filter for Multipath Time Delay Estimation", Proc. the VIII European Signal Processing Conference, September 10-13, 1996, Trieste, Italy, Vol. II, pp. 1275-1278
126. S.Q.Wu, **P.C.Ching**, "Signal Waveform Restoration by Wavelet Denoising", Proc. IEEE-SP Int. Symposium on Time-Frequency and Time-Scale Analysis, June 18-21, 1996, Paris, France, pp. 89-92
127. Z.L.Yu, **P.C.Ching**, "Determination of Vocal Tract Shapes from Formant Frequencies based on Perturbation Theory and Interpolation method, "" Proc. IEEE International Conference on Acoustics, Speech & Signal Processing, May 7-10, 1996, Atlanta, USA, Vol. I, pp. 369-372
128. H.C.So, **P.C.Ching**, "A Generalized Equalization-based Algorithm for Multipath Time Delay Estimation", Proc. IEEE International Symposium on Circuits & Systems, May 12-15, 1996, Atlanta, USA, Vol. II, pp. 556-559
129. X.X.Niu, **P.C.Ching**, "A Wavelet-based Algorithm for Time Delay and Doppler Measurements", Proc. of the International Symposium on Signals, Systems and Electronics, Oct. 25-27, 1995, San Francisco, USA, pp. 485-488
130. Y.P. Ng, **P.C.Ching**, L.W.Chan, "Automatic Recognition of Cantonese Lexical Tones in Connected Speech by Multi-Layer Perceptron", Proc. of the 4th European Conf. on Speech Comm. and Technology, Sept. 18-22, 1995, Madrid, Spain, pp. 2205-2208
131. T.Lee, **P.C.Ching**, L.W.Chan, "An RNN Based Speech Recognition System with Discriminative Training", Proc. of the 4th European Conference on Speech Communication and Technology, Sept. 18-21, 1995, Madrid, Spain, pp. 1667-1670
132. H.C.So, **P.C.Ching**, Y.T.Chan, "An Improvement to the Explicit Time Delay Estimator", Proc. IEEE International Conference on Acoustic, Speech and Signal Processing, May 8-12, 1995, Detroit, USA, pp. 3151-3154
133. T.Lee, **P.C.Ching**, L.W.Chan, "Recurrent Neural Networks for Speech Modeling & Speech Recognition", Proc. IEEE International Conference on Acoustic, Speech and Signal Processing, May 8-12, 1995, Detroit, USA, pp. 3319-3322
134. W.K.Lai, **P.C.Ching**, "Blind Estimation using Higher-Order Cumulants", Proc. IEEE Int. Symposium on Circuits and Systems, April 29-May 3, 1995, Seattle, USA, pp. 2261-2264
135. K.F.Wan, **P.C.Ching**, "A Unified Approach to Split Structure Adaptive Filtering", Proc. IEEE International Symposium on Circuits and Systems, April 29-May 3, 1995, Seattle, USA, pp. 1604-1607
136. B.Zhang, S.Sato, **P.C.Ching**, "Speech Signal Processing using a Time-Frequency Distribution of Cohen's Class", Proc. of the IEEE-SP International Symposium on Time-Frequency and Time-Scale Analysis, October 1994, Philadelphia, USA, pp. 624-627
137. H.C.So, **P.C.Ching**, "Comparative Performances of LMSTDE and ETDE for Delay and Doppler Estimation", Proc. of The 28th Annual Asilomar Conference on Signals, Systems, and Computers, Oct. 31 – Nov. 2, 1994, Pacific Grove, USA, pp. 1501-1505
138. K.F.Wan, **P.C.Ching**, "A Fast Convergence Median LMS Algorithm", Proc. of the IEEE International Symposium on Circuits and Systems, May 30 - June 2, 1994, London, UK, Vol. 2, pp. 377-380
139. K.F.Wan, **P.C.Ching**, "On the Optimality of Convergence Behaviour for Transform-Domain Split-Path Adaptive Filter, "" Proc. of the International Conference on Acoustic,

- Speech & Signal Processing, April 19-22, 1994, Adelaide, Australia, Vol. 3, pp. III 421-424
140. **P.C.Ching**, Tan Lee, Eric Zee, "From Phonology and Acoustic Properties to Automatic Recognition of Cantonese", (invited paper) Proc. 1994 Int. Symposium on Speech, Image Processing and Neural Networks, April 13-16, 1994, Hong Kong, Vol. 1, pp. 127-132
 141. K.M.Chiu, **P.C.Ching**, "A dual-band excitation LSP codec for very low bit rate transmission", Proc. 1994 International Symposium on Speech, Image Processing and Neural Networks, April 13-16, 1994, Hong Kong, Vol. 2, pp. 479-482
 142. K.F.Wan, **P.C.Ching**, "An Adaptive Split-Path Median LMS Line Enhancer", Proc. of The International Conference on Neural Networks and Signal Processing, Nov. 1993, Guangzhou, China, pp. 705-710
 143. T.Lee, **P.C.Ching**, L.W.Chan, B.Mak, "An NN-based Tone Classifier for Cantonese", Proc. of The International Joint Conference on Neural Networks, Oct. 25-29, 1993, Nagoya, Japan, pp. 287-290
 144. H.C.So, **P.C.Ching**, "A Novel Constrained Time Delay Estimator", Proceedings of the International Conf. on Signal Processing '93, October 1993, Beijing, China, pp. 188-191
 145. H.C.So, **P.C.Ching**, K.C.Ho, Y.T.Chan, "A Novel Constrained Algorithm for Delay Estimation in the Presence of Multipath Transmission", Proc. of the IEEE 1993 International Conference on Acoustic, Speech and Signal Processing, April 27-30, 1993, Minnesota, USA, pp. I.313-I.316
 146. C.W.Tsik, **P.C.Ching**, L.W.Chan, "Large Vocabulary Isolated Cantonese Word Recognition using Problem Decomposition and Hierarchical Neural Networks", Proceedings of The Third Meeting of Japanese Neural Network Society, Dec. 4-6, 1992, Osaka, Japan, pp. 207-208
 147. **P.C.Ching**, K.C.Ho, H.C.So, Y.T.Chan, "An Adaptive Algorithm for Multipath Time Delay Estimation", Proc. of The Third International Symposium on Signal Processing and Its Applications, Vol. 2, August 16-21, 1992, Gold Coast, Australia, pp. 421-424
 148. K.C.Ho, **P.C.Ching**, K.F.Wan, "Transform domain LMS adaptation of a split-path filter", Proc. of 1992 IEEE International Symposium on Circuits and Systems, Vol. 3, May 10-13, 1992, San Diego, USA, pp. 1597-1600
 149. K.C.Ho, **P.C.Ching**, "Noise Cancellation using a Split-Path Adaptive Filter", Proc. of China 1991 International Conference on Circuits and Systems, Vol. 1, June 16-17, 1991, Shenzhen, China, pp. 149-152
 150. Y.H.Cheng, **P.C.Ching**, "A Simple Tone Classifier for Cantonese Recognition", Proc. of China 1991 International Conference on Circuits and Systems, Vol. 1, June 16-17, 1991, Shenzhen, China, pp. 18-21
 151. K.C.Ho, **P.C.Ching**, "System Identification Using a Pair of Adaptive Linear Phase Filters", Proc. of 1991 IEEE International Symposium on Circuits and System, Vol. 1, June 11-14, 1991, Singapore, pp. 552-555
 152. K.C.Ho, **P.C.Ching**, Y.T.Chan, "Adaptive Time Delay Estimation in Noisy Environment", Proc. of 1991 IEEE Int. Conference on Acoustics, Speech and Signal Processing, Vol. 2, May 14-17, 1991, Toronto, Canada, pp. 1461-1464
 153. C.K.Wong, **P.C.Ching**, "Digital speech transmission for highly encrypted and paramilitary operated land mobile radio communications over a narrowband UHF channel", Proc. of the Third IEE International Conference on Telecommunications, March 1991, Edinburgh, U.K., pp. 47-52

154. **P.C.Ching**, K.C.Ho, "An efficient adaptive LSP method for speech encoding", IEEE Region 10 Conference on Computer and Communications, Sept. 1990, Hong Kong, pp. 324-328
155. K.C.Ho, **P.C.Ching**, Y.T.Chan, "Convergence Speed Up in Time delay Estimation", 1990 IEEE International Conference on Acoustics, Speech and Signal Processing, April 1990, New Mexico, USA, pp. 1417-1427
156. K.C.Ho, **P.C.Ching**, "A Novel Filter Structure for Adaptive Time Delay Estimation", Proc. International Symposium on Computer Architecture and Digital Signal Processing, Vol. 1, October 1989, Hong Kong, pp. 150-154
157. **P.C.Ching**, Y.T.Chan, "Non-stationary Time Delay Estimation with a Multipath", Proc. IEEE international Conference on Acoustics, Speech and Signal processing, Vol. 4, May 1989, Scotland, pp. 2736-2739
158. P.S.Chung, T.S.Yum, **P.C.Ching**, C.M.Leung, H.T.Tsui, W.K.Cham, "ISDN Trials at the Chinese University of Hong Kong", Proc. International Conference on Communication Systems, Nov. 1988, Singapore, pp. 134-138
159. **P.C.Ching**, C.K.Yu, K.M.Tse, Y.T.Chan, "Speech recognition of Cantonese based on a probabilistic approach", Proc. International Conference on Computer Processing of Chinese & Oriental Languages, Sept., 1988, Toronto, Canada, pp. 561-564
160. Y.T.Chan, **P.C.Ching**, K.M.Tse, "Constrained adaptive time delay estimation in the presence of a multipath", (Invited Paper) Proc. 8th IFAC/IFORS Symposium on Identification and System Parameter Estimation, Vol. 3, August, 1988, Beijing, China, pp. 1475-1479
161. **P.C.Ching**, Y.H.Tam, "System modeling using adaptive IIR filters", Proc. China Seventh Conference on Circuits and Systems, Vol. 2, Nov. 1987, Shenzhen, China, pp. 23.10-23.13
162. **P.C.Ching**, Y.T.Chan, K.M.Tse, "An efficient adaptive algorithm for time delay estimation", Proc. IEEE Asian Electronics Conference, Sept. 1-4, 1987, Hong Kong, pp. 547- 556
163. **P.C.Ching**, W.M.Lai, Y.T.Chan, "An efficient technique for isolated word recognition of monosyllabic languages", Proc. European Conference on Speech Technology, Vol. 2, Sept. 2-4, 1987, Edinburgh, U.K., pp. 288-291
164. **P.C.Ching**, Y.T.Chan, K.M.Tse, "Constrained Adaptive Estimation of Time Delay with Multipath", Proc. of The 11th GRETSI Symposium on Signal and Image Processing, Vol. 1, June 1-5, 1987, Nice, France, pp. 305-308
165. W.M.Lai, **P.C.Ching**, "Time-encoded Deltamodulation of Speech Signals", Proc. of ISMM International Symposium on Software and Hardware Applications of Microcomputers, Feb. 5-7, 1986, L.A., USA, pp. 31-35
166. Y.T.Chan, **P.C.Ching**, W.M.Lai, "A Microcomputer-based, Speaker-independent, Isolated Word Recognition System", Proc. of ISMM Int. Symposium on Software & Hardware Applications of Microcomputers, Feb. 5-7, 1986, LA, USA, pp. 6-9
167. **P.C.Ching**, "A study of time encoded speech", Proc. IERE Hong Kong Section Workshop on Advanced Microprocessors and Digital Signal Processing, Sept. 1982, Hong Kong, pp. 102-116
168. **P.C.Ching**, C.C.Goodyear, "An adaptive predictive method for speech signals", Proc. of The Fourth F.A.S.E. Symposium on Acoustics and Speech, April, 21-24, 1981, Venice, Italy, pp. 211-214
169. C.C.Goodyear, **P.C.Ching**, "Sequency sub-band coding of speech residuals", Proc. of The Fourth F.A.S.E. Symposium on Acoustics and Speech, April, 21-24, 1981, Venice, Italy pp. 207-210