Publications of C H Lai

I. Journal papers

1. C H Lai, *Charm contribution to neutrino-induced production of opposite-sign dimuons*, Physical Review **D18** (1978) 1422-1430

2. P Hoyer, C Peterson, C H Lai and J L Petersen, *Hadron distributions in quark jets*, Nuclear Physics **B151** (1979) 389-398

3. C H Lai, J L Petersen and T F Walsh, *Multijet structure in quantum chromodynamics*, Nuclear Physics **B173** (1980) 244-268

4. Y K Lim, K K Phua and C H Lai, *Charged-particle ratios in $\pi^- p$ collisions and quark statistics*, Physical Review **D24** (1981) 2973-2975

5. C H Lai, S Y Lo and K K Phua, *Determination of the pion form factor at large momentum transfer squared*, Physics Letters **B122** (1983) 177-180

6. C H Lai, S Y Lo and K K Phua, *Possible existence of further dip structures in πp and Kp elastic collisions*, Physical Review **D27** (1983) 2214-2215

7. C H Lai and C H Oh, *Color screening in classical Yang-Mills theories with sources*, Physical Review **D29** (1984) 1805-1808

8. C H Oh, S N Chow and C H Lai, *Bifurcation of the Coulomb solution of the Yang-Mills equations with sources*, Physical Review **D30** (1984) 1334-1337

9. B W Chua and C H Lai, *Photoproduction of ρ^0 and ω and the Chou-Yang model*, Singapore Journal of Physics **1** (1984) 85-88

10. C H Oh, C H Lai and C P Soo, *Bifurcation of the type-II solutions of the Yang-Mills equations with static sources*, Physical Review **D32** (1985) 2843-2845

11. B W Chua and C H Lai, *Possible structures in the pion form factor*, Physics Letters **B150** (1985) 455-457

12. C H Lai, *Computation of Gaussian convolution integrals in the Chou-Yang model of elastic scattering*, Singapore Journal of Physics **2** (1985) 65-68

13. C H Lai and C H Oh, *Color screening and topological index in the classical Yang-Mills theory with sources*, Physical Review **D33** (1986) 1825-1827

14. C H Oh, C H Lai and R Teh, *Color radiation in the classical Yang-Mills theory*, Physical Review **D33** (1986) 1133-1136

15. C H Lai, *Perturbative results from the 1/N expansion of screened Coulomb potentials*, Journal of Mathematical Physics **28** (1987) 1801-1808

16. C H Oh, K Singh and C H Lai, *On the consistency condition of the Kaluza-Klein ansätz*, Classical and Quantum Gravity **4** (1987) L169-L171

17. C H Oh, C P Soo and C H Lai, *Global gauge transformations and conserved, gauge-invariant electric and magnetic charges in Yang-Mills gauge theories*, Physical Review **D36** (1987) 2532-2538

18. C H Oh, C P Soo and C H Lai, *The propagator in the generalized Aharonov-Bohm effect*, Journal of Mathematical Physics **29** (1988) 1154-1157

19. C H Oh, K Singh and C H Lai, *Some global properties and invariance of bundle metrics in the Kalaza-Klein scheme*, Journal of Mathematical Physics **29** (1988) 2641-2652

20. C H Lai, *A note on gauge-fixing and the chiral Schwinger model*, Singapore Journal of Physics **6** (1989) 65-68

21. Soo-Y Lee and C H Lai, *A simple method to determine bond lengths and excited state surfaces from electronic-vibrational spectra*, Chemical Physics Letters **167** (1990) 255-262

22. C H Lai and C Ting, *Braid group representation and fractional quantum Hall effect*, Modern Physics Letters **B19** (1991) 1293-1299

23. C Ting and C H Lai, *Path integral representation of the Artin braid group*, Physics Letters **B265** (1991) 341-346

24. C Ting and C H Lai, *Spinning braid group representation and the fractional quantum Hall effect*, Nuclear Physics **B396** (1993) 429-464

25. B E Baaquie and C H Lai, *Numerical simulation of the SU(3) Wess-Zumino term in two and four dimensions*, International Journal of Modern Physics **C6** (1995) 617-626

26. W H Steeb, R Stoop, C H Lai and O M Villet, *Coupled chaotic oscillators and control of chaos*, South African Journal of Physics **91** (1995) 273-274

27. W H Steeb and C H Lai, *A note on Lax representation and Kronecker product*, International Journal of Theoretical Physics **35** (1996) 281-285

28. M Y Yu, C T Zhou and C H Lai, *The bifurcation characteristics of the generalized Lorenz equations*, Physica Scripta **54** (1996) 321-324

29. C T Zhou and C H Lai, *Pseudorecurrence and chaos in cubic-quintic nonlinear Schrödinger equation*, International Journal of Modern Physics **C7** (1996) 775-786

30. C H Lai, C T Zhou and M Y Yu, *Bifurcation structure and periodic orbits of the Lorenz equations in the Prandtl number space*, Modern Physics Letters **B10** (1996) 1431-1440

31. C T Zhou, C H Lai and M Y Yu, *Chaos, bifurcation and periodic orbits of the Lorenz-Stenflo system*, Physical Scripta **55** (1997) 394-402

32. C T Zhou, C H Lai and M Y Yu, *Bifurcation behavior of the generalized Lorenz equations at large rotation numbers*, Journal of Mathematical Physics **38** (1997) 5225-5239

33. C S Zhou and C H Lai, *Synchronization with positive Lyapunov exponents*, Physical Review **E58** (1998) 5188-5191

34. C H Lai and C S Zhou, *Synchronization of chaotic maps by symmetric common noise*, Europhysics Letters **43** (1998) 376-380

35. C S Zhou, Z Hou and C H Lai, *Synchronization of chaos via optimal parameter perturbation using short time series data*, Physica Scripta **60** (1999) 17-27

36. C S Zhou and C H Lai, *Amplification of weak signals and stochastic resonance via on-off intermittency with symmetry breaking*, Physical Review **E60** (1999) 3928-3935

37. C S Zhou and C H Lai, *Extracting messages masked by chaotic signals of time-delay systems*, Physical Review **E60** (1999) 320-323

38. C S Zhou and C H Lai, *Simple driven maps as sensitive devices*, Physical Review **E59** (1999) 4007-4012

39. C S Zhou and C H Lai, *Robustness of supersensitivity to small signals in nonlinear dynamical systems*, Physical Review **E59** (1999) 6243-6246

40. C S Zhou and C H Lai, *Decoding information by following parameter modulation with parameter adaptive control*, Physical Review **E59** (1999) 6629-6636

41. Xiaofeng Gong and C H Lai, *Improvement of the local prediction of chaotic time series*, Physical Review **E60** (1999) 5463-5468

42. C H Lai, C T Zhou and M Y Yu, *Secured encryption using chaotic carriers*, Physica Scripta **59** (1999) 198-203

43. C S Zhou and C H Lai, *Analysis of spurious synchronization with positive conditional Lyapunov exponents in computer simulations*, Physica D: Nonlinear Phenomena **135** (2000) 1-23

44. Xiaofeng Gong and C H Lai, *Detecting chaos from time series*, Journal of Physics **A33** (2000) 1007-1016

45. Xiaofeng Gong and C H Lai, *On the synchronization of different chaotic oscillators*, Chaos, Solitons and Fractals **11** (2000) 1231-1235

46. T Lin, K P Loh, A T S Wee, Z X Shen, J Y Lin, C H Lai, Q J Gao and T J Zhang, *High resolution transmission electron microscopy study of the initial growth of diamond on silicon*, Diamond and Related Materials **9** (2000) 1703-1707

47. Shuguang Guan, C H Lai and G W Wei, *Fourier-Bessel analysis of patterns in a circular domain*, Physica D: Nonlinear Phenomena **151** (2001) 83-98

48. Jiao Wang, C H Lai and Yan Gu, *Ergodicity and scars of the quantum cat map in the semiclassical regime*, Physical Review **E63** (2001) 056208-1:12

49. Shuguang Guan, C H Lai and G W Wei, *A wavelet method for the characterization of spatiotemporal patterns*, Physica D: Nonlinear Phenomena **163** (2002) 49-79

50. Meng Zhan, G W Wei and C H Lai, *Transition from intermittency to periodicity in lag synchronization in coupled Rössler oscillators* , Physical Review **E65** (2002) 036202-1:5

51. Meng Zhan, G W Wei, C H Lai, Ying-Cheng Lai and Zonghua Liu, *Coherence resonance near Hopf bifurcation from chaos*, Physical Review **E66** (2002) 036201-1:5

52. Y-C Lai, Z Liu, G W Wei and C H Lai, *Shadowing of statistical averages in chaotic systems*, Physical Review Letters **89** (2002) 184101-1:4

53. G W Wei, Meng Zhan and C H Lai, *Tailoring wavelets for chaos control*, Physical Review letters **89** (2002) 284103-1:4
This work is highlighted in Physical Review Letters
`http://scitation.aip.org/dbt/dbt.jsp?KEY=PRLTAO&Volume=89&Issue=28`
and featured in Nature Vol 422, pages 384-385, 27 March 2003

54. Shuguang Guan, C H Lai and G W Wei, *Geometry and boundary control of pattern formation and competition*, Physica D: Nonlinear Phenomena **176** (2003) 19-43

55. Shuguang Guan, Y C Zhou, G W Wei and C H Lai, *Controlling flow turbulence*, Chaos: An Interdisciplinary Journal of Nonlinear Science **13** (2003) 64-70

56. Xingang Wang, Meng Zhan, C H Lai and Gang Hu, *Measure synchronization in coupled φ^4 Hamiltonian Systems*, Physical Review **E67** (2003) 066215:1-8

57. Shuguang Guan, G W Wei and C H Lai, *Characterizing the spatiotemporal dynamics of turbulence*, Computer Physics Communications **155** (2003) 77-91

58. Meng Zhan, Xingang Wang, Xiaofeng Gong, G W Wei and C H Lai, *Complete synchronization and generalized synchronization of one-way coupled time-delay systems*, Physical Review **E68** (2003) 036208:1-5

59. D M Tong, J-L Chen, L C Kwek, C H Lai and C H Oh, *General formalism of Hamiltonians for realizing a prescribed evolution of a qubit*, Physical Review A **68** (2003) 062307:1-5

60. Xingang Wang, Meng Zhan, C H Lai and Gang Hu, *Error function attack of chaos synchronization based encryption schemes*, Chaos: An Interdisciplinary Journal of Nonlinear Science **14** (2004), 128-137

61. Xingang Wang, Meng Zhan, C H Lai and Ying-Cheng Lai, *Strange nonchaotic attractors in random dynamical systems*, Physical Review Letters **92** (2004) 074102: 1-4

62. Z S Wang, L C Kwek, C H Lai and C H Oh, *Quantum tunneling time*, Physical Review A **69** (2004) 052108:1-5

63. Xiaofeng Gong, Xingang Wang, Meng Zhan and C H Lai, *Chaotic digital communication by encoding initial conditions*, Chaos: An Interdisciplinary Journal of Nonlinear Science **14** (2004), 358-363.

64. Daihai He, Meng Zhan and C H Lai, *Spurious synchronization in non-diagonally coupled identical Lorenz oscillators*, Physics Letters A **326** (2004) 349-354.

65. Shuguang Guan, G W Wei and C H Lai, *Controllability of flow turbulence*, Physical Review E **69** (2004) 066214:1-12

66. L Y Chew, C Ting and C H Lai, *Chaos-induced escape over a potential barrier*, Physical Review E **70** (2004) 045203:1-4

67. Xingang Wang, Meng Zhan, C H Lai and Xiaofeng Gong, *Spread-spectrum communication using binary spatiotemporal chaotic sequences*, Physics Letters A **334** (2005) 30-36.

68. Meng Zhan, Xingang Wang, Xiaofeng Gong and C H Lai, *Spatially periodic and temporally chaotic patterns in a coupled nonidentical chaotic system*, Chaos, Solitons and Fractals **24** (2005) 767-774.

69. J Du, T Durt, P Zou, H Li, L C Kwek, C H Lai, C H Oh, and A Ekert, *Experimental quantum cloning with prior partial information*, Physical Review Letters **94** (2005) 040505:1-4

70. Shuguang Guan, C H Lai and G W Wei, *Bistable chaos without symmetry in generalized synchronization*, Physical Review E **71** (2005) 036209:1-11

71. Meng Zhan, Xingang Wang, Xiaofeng Gong and C H Lai, *Phase synchronization of a pair of spiral waves*, Physical Review E **71** (2005) 036212:1-6

72. Z S Wang, L C Kwek, C H Lai and C H Oh, *Geometric phase and entanglement for massive spin-1 particles*, European Physics Journal D **33** (2005) 285-296

73. Xingang Wang, Meng Zhan, Xiaofeng Gong and C H Lai, *Public-key encryption based on generalized synchronization of coupled map lattices*, Chaos: An Interdisciplinary Journal of Nonlinear Science **15** (2005) 023109:1-8.

74. Ying-Cheng Lai, Zonghua Liu, Guo-Wei Wei and C H Lai, Response to the comment [Physical Review Letters **94** (2005) 219402-1] by S Kraut on *Shadowability of Statistical Averages in Chaotic Systems*, Physical Review Letters **94** (2005) 219403

75. Shuguang Guan, C H Lai and G W Wei, *Phase synchronization between two essentially different chaotic systems*, Physical Review **E72** (2005) 016205:1-5

76. L Y Chew, C Ting and C H Lai, *Chaotic resonance: two-state model with chaos-induced escape rate over potential barrier*, Physical review **E72** (2005) 036222:1-13

77. Xingang Wang and C H Lai, *On generating binary spatiotemporal chaotic sequences and its application on spread-spectrum communications*, International Journal of Bifurcation and Chaos in Applied Science and Engineering **16** (2006) 213-219

78. Shuguang Guan, Y C Lai, C H Lai and Xiaofeng Gong, *Understanding synchronization induced by "common noise"*, Physics Letters **A353** (2006) 30-33

79. Shuguang Guan, Y-C Lai and C H Lai, *Effect of noise on generalized chaotic synchronization*, Physical Review **E73** (2006) 046210-1:5

80. Shuguang Guan, Xingang Wang and C H Lai, *Frequency locking by external force from a dynamical system with strange nonchaotic attractor*, Physics Letters **A354** (2006) 298-304

81. Shuguang Guan, K Li and C H Lai, *Chaotic synchronization through coupling strategies*, Chaos: An Interdisciplinary Journal of Nonlinear Science **16** (2006) 023107:1-9.

82. Jiao Wang and C H Lai, *Dynamical noise filter and symbolic analysis in chaos synchronization*, Chaos: An Interdisciplinary Journal of Nonlinear Science **16** (2006) 023121:1-8

83. Z S Wang, L C Kwek, C H Lai and C H Oh, *Geometric phase in open two-level system*, Europhysics Letters **74** (2006) 958-964

84. Xingang Wang, Y-C Lai and C H Lai, *Effect of resonant-frequency mismatch on attractors*, Chaos: An Interdisciplinary Journal of Nonlinear Science **16** (2006) 023127:1-5

85. Xingang Wang, Y-C Lai and C H Lai, *Characterization of noise-induced strange nonchaotic attractors*, Physical Review **E74** (2006) 016203:1-11

86. X-L Feng, L C Kwek, C H Lai and C H Oh, *Quantum computation based on a quantum switch in cavity QED*, Laser Physics **16** (2006) 1-4

87. S F Shieh, Y Q Wang, G W Wei and C H Lai, *Mathematical analysis of the wavelet method of chaos control*, Journal of Mathematical Physics **47** (2006) 082701:1-10

88. Zisheng Wang, L C Kwek, C H Lai and C H Oh, *Quantum tunneling via quantum geometric phase*, Physics Letters **A359** (2006) 608-612

89. J Ma, Shuguang Guan and C H Lai, *Disorder effect on electronic and optical properties of doped carbon nanotubes*, Physical Review B74 (2006) 205401:1-9
This work has been selected for the November 13, 2006 issue of Virtual Journal of Nanoscale Science & Technology. The Virtual Journal, which is published by the American Institute of Physics and the American Physical Society in cooperation with numerous other societies and publishers, is an edited compilation of links to articles from participating publishers, covering a focused area of frontier research.

90. Xingang Wang, Y-C Lai and C H Lai, *Oscillations of complex networks*, Physical Review **E74** (2006) 066104:1-5

91. Z S Wang, C Wu, X-L Feng, L C Kwek, C H Lai and C H Oh, *Effects of a squeezed-vacuum reservoir on geometric phase*, Physical Review **A75** (2007) 024102:1-4

92. Z S Wang, L C Kwek, C H Lai and C H Oh, *Dynamical symmetry and geometric phase*, Physica Scripta **75** (2007) 494-499

93. X-L Feng, Z Wang, C Wu, L C Kwek, C H Lai and C H Oh, *A scheme for unconventional geometric quantum computation in cavity QED*, Physical Review **A75** (2007) 052312:1-7

94. X Wang, Y-C Lai and C H Lai, *Enhancing synchronization based on complex gradient networks*, Physical Review **E75** (2007) 056205:1-5

95. C Wu, Z Wang, X-L Feng, H-S Goan, L C Kwek, C H Lai and C H Oh, *Unconventional geometric quantum computation in a two-mode cavity*, Physical Review **A76** (2007) 024302:1-4

96. Z S Wang, C Wu, X-L Feng, L C Kwek, C H Lai, C H Oh and V Vedral, *Nonadiabatic geometric quantum computation*, Physical Review **A76** (2007) 044303:1-4

97. L Huang, Y-C Lai, K Park, X Wang, C H Lai and R A Gatenby, *Synchronization in complex clustered networks*, Frontiers of Physics in China, **2** (2007) 446-459

98. X Wang, L Huang, Y-C Lai and C H Lai, *Optimization of synchronization in gradient clustered networks*, Physical Review **E76** (2007) 056113:1-5
This work has been selected for the December 1, 2007 issue of Virtual Journal of Biological Physics Research. The Virtual Journal, which is published by the American Institute of Physics and the American Physical Society in cooperation with numerous other societies and publishers, is an edited compilation of links to articles from participating publishers, covering a focused area of frontier research.

99. B Qiao, C H Lai, C T Zhou, X T He, X G Wang and M Y Yu, *Nonlinear properties of relativistically intense laser in plasmas*, Physics of Plasmas **14** (2007) 112301:1-7
This work has been selected for the December 2007 issue of Virtual Journal of Ultrafast Science. The Virtual Journal, which is published by the American Institute of Physics and the American Physical Society in cooperation with numerous other societies and publishers, is an edited compilation of links to articles from participating publishers, covering a focused area of frontier research.

100. B Qiao, C H Lai, C T Zhou, X T He and X G Wang, *Complex dynamics of femtosecond terawatt laser pulses in air*, Applied Physics Letters **91** (2007) 221114:1-3

101. Z S Wang, C Wu, X-L Feng, L C Kwek, C H Lai, C H Oh and V Vedral, *Geometric phase induced by quantum nonlocality*, Physics Letters **A 372** (2008) 775-778

102. Cangtao Zhou, Tianxing Cai, C H Lai, Xingang Wang and Y-C Lai, *Model-based detector and extraction of weak signal frequencies from chaotic data*, Chaos: An Interdisciplinary Journal of Nonlinear Science **18** (2008) 013104:1-12

103. K Li and C H Lai, *Adaptive-impulsive sychronization of uncertain complex dynamical networks*, Physics Letters **A372** (2008) 1601-1606

104. S Guan, X Wang, K Li, B-H Wang and C H Lai, *Synchronizability of network ensembles with prescribed statistical properties*, Chaos: An Interdisciplinary Journal of Nonlinear Science**18** (2008) 013120:1-6

105. S Guan, X Wang, Y-C Lai and C H Lai, *Transition to global synchronization in clustered networks*, Physical Review **E77** (2008) 046211:1-5
This work has been selected for the April 15, 2008 issue of Virtual Journal of Biological Physics Research. The Virtual Journal, which is published by the American Institute of Physics and the American Physical Society in cooperation with numerous other societies and publishers, is an edited compilation of links to articles from participating publishers, covering a focused area of frontier research.

106. X Wang, C Zhou and C H Lai, *Multiple effects of gradient coupling on network synchronization*, Physical Review **E77** (2008) 056208:1-5

107. X Gong, S Guan, X Wang and C H Lai, *Stability of the steady state of delay-coupled chaotic maps on complex networks*, Physical Review **E77** (2008) 056212:1-9

108. X Gong, K Li and C H Lai, *Optimal resource allocation for efficient transport on complex networks*, Europhysics Letters **83** (2008) 28001:1-6

109. X-L Feng, C Wu, C H Lai and C H Oh, *Universal quantum computation with trapped ions in thermal motion by adiabatic passage*, Physical Review **A77** (2008) 062336:1-5

110. S Yu, Q Chen, C H Lai and C H Oh, *Nonadditive quantum error-correcting code*, Physical Review Letters **101** (2008) 090501:1-4

111. B Qiao, C T Zhou, X T He and C H Lai, *Progress of pattern dynamics in plasma waves*, Communications in Computational Physics **4**(2008) 1129-1150

112. X Wang, S Guan, Y-C Lai and C H Lai, *Onset of synchronization in complex gradient networks*, Chaos: An Interdisciplinary Journal of Nonlinear Science **18** (2008) 037117:1-7

113. K Li, S Guan, X F Gong and C H Lai, *Synchronization stability of general complex dynamical networks with time-varying delays*, Physics Letters **A372** (2008) 7133-7139

114. J Wang and C H Lai, *Detecting groups of similar components in complex networks*, New Journal of Physics **10** (2008) 123023:1-26

115. S Guan, X Wang, X Gong, K Li and C H Lai, *The development of generalized synchronization on complex networks*, Chaos: An Interdisciplinary Journal of Nonlinear Science **19** (2009) 013130:1-9

116. X Wang, S Guan and C H Lai, *Protecting infrastructure networks from cost-based attacks*, New Journal of Physics **11** (2009) 033006:1-9

117. S Guan, X Wang, K Li and C H Lai, *The many faces of sychronizability of networks*, Modern Physics Letters **B23** (2009) 1983-1988

118. Weiqing Liu, Xingang Wang, Shuguang Guan and C H Lai, *Transition to amplitude death in scale-free networks*, New Journal of Physics, **11** (2009) 093016:1-9

119. J Wang, G Casati, T Prosen and C H Lai, *A one-dimensional hard-point gas as a thermoelectric engine*, Physical Review **E80** (2009) 031136:1-4

120. X Wang, S Guan, Y-C Lai, B Li and C H Lai, *Desynchronization and on-off intermittency in coupled complex networks*, Europhysics Letters **88** (2009) 28001:1-5

121. H Zou, S Guan and C H Lai, *Dynamical formation of stable irregular transients in discontinuous map systems*, Physical Review **E80** (2009) 046214:1-6
This work has been selected for the November 1, 2009 issue of Virtual Journal of Biological Physics Research. The Virtual Journal, which is published by the American Institute of Physics and the American Physical Society in cooperation with numerous other societies and publishers, is an edited compilation of links to articles from participating publishers, covering a focused area of frontier research.

122. Y Zhou, J Zhou, X Wang, S Guan, C H Lai and Z Liu, *Resonance effect of direction-phase clusters in a scale-free network*, Europhysics Letters **90** (2010) 30005:1-6

123. Shuguang Guan, Xiaofeng Gong, Kun Li, Zonghua Liu and C H Lai, *Characterizing generalized synchronization in complex networks*, New Journal of Physics **12** (2010) 073045:1-16

124. Hailin Zou, Xiaofeng Gong and C H Lai, *Unstable attractors with active simultaneous firing in pulse-coupled oscillators*, Physical review **E82** (2010) 046209:1-8
This work has been selected for the July 1, 2010 issue of Virtual Journal of Biological Physics Research.

The Virtual Journal, which is published by the American Institute of Physics and the American Physical Society in cooperation with numerous other societies and publishers, is an edited compilation of links to articles from participating publishers, covering a focused area of frontier research.

125. Menghui Li, Shuguang Guan and C H Lai, *Spontaneous formation of dynamical groups in an adaptive networked system*, New Journal of Physics **12** (2010) 103032:1-14

126. Menghui Li, Xingang Wang and C H Lai, *Evolution of functional subnetworks in complex systems*, Chaos: An Interdisciplinary Journal of Nonlinear Science **20** (2010) 045114:1-6

127. Kun Li, Xiaofeng Gong, Shuguang Guan and C H Lai, *Analysis of traffic flow on complex networks*, International Journal of Modern Physics **B25** (2011) 1419-1428

128. Menghui Li, Xingang Wang, Ying Fan, Zengru Di and C H Lai, *Onset of synchronization in weighted complex networks: the effect of weight-degree correlation*, Chaos: An Interdisciplinary Journal of Nonlinear Science **21** (2011) 025108:1-8

129. Ming Zhao, Changsong Zhou, Jinhu Lü and C H Lai, *Competition between intra-community and inter-community synchronization and relevance in brain cortical networks*, Physical Review **E84** (2011) 016109:1-9

130. M H Li, S G Guan and C H Lai, *Formation of modularity in a model of evolving networks*, Europhysics Letters **95** (2011) 58004:1-6

131. Kun Li, Xiaofeng Gong, Shuguang Guan and C H Lai, *Effective algorithm based on neighborhood overlap for community identification in complex networks*, Physica A **391** (2012) 1788-1796

132. N N Chung, L Y Chew and C H Lai, *Network extreme eigenvalue - from multimodel to scale-free networks*, Chaos: An Interdisciplinary Journal of Nonlinear Science **22** (2012) 013139:1-5

133. G Yan, J Ren, Y-C Lai, C-H Lai and B Li, *Controlling complex networks – how much energy is needed?*, Physical Review Letters **108** (2012) 218703:1-5

134. N N Chung, L Y Chew, J Zhou and C H Lai, *Impact of edge removal on the centrality betweenness of the best spreaders*, Europhysics Letters **98** (2012) 58004:p1-p5

135. F-J Liang, M Zhao and C H Lai, *Synchronization optimal networks obtained using local structure information*, Physica A **391** (2012) 5279-5284

136. J Zhou, N N Chung, L Y Chew and C H Lai, *Epidemic spreading induced by diversity of agents' motilities*, Physical Review E **86** (2012) 026115:1-7

137. Sixia Yu, Q Chen, C Zhang, C H Lai and C H Oh, *All entangled pure states violate a single Bell's inequality*, Physical Review Letters **109** (2012) 120402:1-5

138. Hailin Zou, Menghui Li, C H Lai and Y-C Lai, *Origin of chaotic transients in excitatory pulsed coupled networks*, Physical Review E **86** (2012) 066214:1-7

139. Xiaofeng Gong, Kun Li, Menghui Li and C H Lai, *A spectral algorithm of community identification*, Europhysics Letters **101** (2013) 48001:1-6

140. N N Chung, L Y Chew and C H Lai, *Spectral analysis on explosive percolation*, Europhysics Letters **101** (2013) 66003:1-4
This work has been selected as a highlight by the Co-Editor of the journal. Highlighted articles are available free to all throughout 2013 and 2014 and may be selected for inclusion in the Highlights of 2013 booklet that will be in circulation during 2014.

141. Jie Zhou, Gang Yan and C H Lai, *Efficient routing on a multilayered communication networks*, Europhysics Letters **102** (2013) 28002:1-6

142. Menghui Li, Hailin Zou, Shuguang Guan, Xiaofeng Gong, Zengru Di and C H Lai, *A coevolving model based on preferential triadic closure for social media networks*, Scientific Reports **3** (2013) 2512:1-10

143. N N Chung, L Y Chew and C H Lai, *Influence of network structure on cooperative dynamics in coupled socio-ecological systems*, Europhysics Letters **104** (2013) 28003:1-6

144. Qing Chen, Sixia Yu, Chengjie Zhang, C H Lai and C H Oh, *Test of genuine multipartite nonlocality without inequalities*, Physical Review Letters **112** (2014) 110404:1-5

145. N N Chung, L Y Chew and C H Lai, *Influence of community structure on cooperative dynamics in coupled socio-ecological systems*, Acta Physica Polonica B Proceedings Supplement **7** (2014) 257-264

146. Menghui Li, Shuguang Guan, Xiaofeng Gong, Kun Li, Jinshan Wu, Zengru Di and C H Lai, *From sparse to dense and from assortative to disassortative in online social networks*, Scientific Reports **4** (2014) 4861:1-8

147. Xin Hu, S Boccaletti, Wenwen Huang, Xiyun Zhang, Zonghua Liu, Shuguang Guan and C H Lai, *Exact solution for first-order synchronization transition in a generalized Kuramoto model*, Scientific Reports **4** (2014) 7262:1-6

148. H S Sugiarto, N N Chung, C H Lai and L Y Chew, *Socioecological regime shifts in the setting of complex social interactions*, Physical Review E **91** (2015) 062804:1-11

149. Chengjie Zhang, Sixia Yu, Qing Chen, C H Lai and C H Oh, *Complete condition for nonzero quantum correlation in continuous variable systems*, New Journal of Physics **17** (2015) 093007:1-12

II. Preprints:

1. N N Chung, L Y Chew, W Chen, R M D'Souza and C H Lai, *Distinguishing the roles of influential and susceptible individuals in social contagion*, April 2016

2. N N Chung, L Y Chew and C H Lai, *Critical Transitions in the American Presidential Election*, June 2016

3. S Ma, L Feng, C P Monterola and C H Lai. *Importance of small nodes in assortative network with degree-weight correlations*, June 2016

4. H S Sugiarto, J S Lansing, N N Chung, C H Lai, S A Cheong and L Y Chew, *Social cohesion in communities mediated through common pool resource exploitation*, June 2016

III. Reports

1. C H Lai and C Quigg, *An estimate of the branching ratios for Dalitz pair decays of the ω^0 meson*, Fermilab Physics Note FN-296 (September 1976)

2. P Hoyer, C H Lai and J L Petersen, *Multiperipheral quark fragmentation*, NORDITA report 79/22 (June 1979)

3. Teo Kien Boon, Gong Xiaofeng, Zhou Cang Tao and Lai Choy Heng, *Weak Signal Detection by Nonlinearity and Neural-Networks-Based Cascading Classifier - Report of a Technical Collaboration between DSO National Laboratories and the National University of Singapore on Nonlinear Dynamical Modeling*, DSO and NUS Technical Report, September 2001

4. Koh Abe *et al.*, *Particle Physics Experiments at JLC*, ACFA Linear Collider Working Group Report, 2001 (arXiv:hep-ph/0109166 v1, 19 Sep 2001)

5. Koya Abe *et al.*, *GLC Project - Linear Collider for TeV Physics*, Asian Committee for Future Accelerators, Japan High Energy Physics Committee, and High Energy Accelerator Research Organization, KEK Report 2003-7, September 2003

6. X Wang, J Wang, X Gong, K Li, S Guan and C H Lai, *An efficient self-synchronizing stream cipher (SSSC) system*, report submitted to Defence Science and Technology Agency (DSTA), Singapore, January 2006

7. Koh Abe *et al.*, *GLD Detector Outline Document: Version 1.2*, GLD Concept Study Group, arXiV: physics/0607154 (July 2006)

IV. Editorial Work on Books

1. C H Lai, editor, *Gauge Theory of Weak and Electromagnetic Interactions*, World Scientific Pub Co, Singapore, 1981.
2. C H Lai and R N Mohapatra, editors, *Gauge Theories of Fundamental Interactions*, World Scientific Pub Co, Singapore, 1981.
3. C H Lai and Z Hassan, editors, *Ideals and Realities - Selected Essays of Abdus Salam*, World Scientific Pub Co, Singapore, 1984.
4. C H Lai, editor, *Ideals and Realities - Selected Essays of Abdus Salam*, Second Edition, World Scientific Pub Co, Singapore, 1987.
5. B E Baaquie, C K Chew, C H Lai, C H Oh and K K Phua, editors, *High Temperature Superconductivity and Other Related Topics*, World Scientific Pub Co, Singapore, 1988.
6. C H Lai and A Kidwai, editors, *Ideals and Realities - Selected Essays of Abdus Salam*, Third Edition, World Scientific Pub Co, Singapore, 1989.
7. L H Y Chen, J Packer Jesudason, C H Lai, C H Oh, K K Phua and E-C Tan, *Challenges for the 21st Century*, Proceedings of the International Conference on Fundamental Sciences: Mathematics and Theoretical Physics, Singapore, 13-17 September 2000, World Scientific Pub Co, Singapore, 2001

V. Conference Papers

1. C H Lai, *Multiperipheral quark fragmentation*, Meeting on Jets in QCD, Deutsches Eletronen-Synchrotron DESY, October 1979, Hamburg, Germany.

2. C H Lai, *Multijet substructures at high energies*, Spøatind Meeting on High Energy Physics, January 1980, Oslo, Norway.

3. C H Lai, *Jet evolution and multijets in QCD*, International Conference on Physics and Technology in the Eighties, September 1980, Kuala Lumpur, Malaysia

4. C H Lai, *Determination of the pion form factor*, Rencontre de Moriond, March 1982, Les Arcs, France.

5. C H Lai, *Color radiation in the classical Yang-Mills theory*, 8th Kyoto Summer Institute on Quantum Gravity and Cosmology, May 1985, Kyoto, Japan

6. C H Oh, K Singh and C H Lai, *Consistency in the Kaluza-Klein scheme*, in *Conformal Field Theory, Anomalies and Superstrings*, pp. 551-560. World Scientific Publishing Co., Singapore, 1988. (Paper presented at the First Asia-Pacific Workshop on High Energy Physics, 21-27 June 1987, Singapore)

7. C H Oh, C P Soo and C H Lai, *Conserved gauge-invariant charges in Yang-Mills gauge field theories*, in *Conformal Field Theory, Anomalies and Superstrings*, pp. 540-550. World Scientific Publishing Co., Singapore, 1988. Publishing Co., Singapore, 1988. (Paper presented at the First Asia-Pacific Workshop on High Energy Physics, 21-27 June 1987, Singapore)

8. C H Lai, *Chaotic dynamics: computation and visualization*, in *Proceedings of the Second International Conference on Computational Physics*, edited by De-Yuan Li, Da-Hsuan Feng, M R Strayer and Tian-Yuan Zhang, pp. 327-335. International Press, Hong Kong, 1995. [Invited speaker]

9. C H Lai and T T Lin, *Fractal conductance fluctuations in a quantum billiard*, in *Proceedings of the Regional Workshop on Computational Methods and Simulation in Engineering 1997*, pp. VI.3:1-20. Bandung Institute of Technology, Bandung, Indonesia, 1997. [Invited speaker]

10. Xingang Wang, Gang Hu, C H Lai and Kai Hu, *Transition to measure synchronization in coupled Hamiltonian systems*, in *Proceedings of the 2002 Dynamics Days–Asia Pacific: 2nd International Conference in Nonlinear Science, Hangzhou, China, May 2003*, *International Journal of Modern Physics B*, Vol. **17**, 4349-4354 (2003)

11. Xiaofeng Gong, Cangtao Zhou and C H Lai, *Nonlinear improvement of vehicle detection using seismic signals*, Paper No. 0325, presented at the *Shanghai International Symposium on Nonlinear Science and Applications - 2003*, Shanghai, China, 9-13 November 2003.

12. Xingang Wang and C H Lai, *Spread-spectrum communication using binary spatiotemporal chaotic sequences*, presented at the *Shanghai International Symposium on Nonlinear Science and Applications - 2003*, Shanghai, China, 9-13 November 2003.

13. K Li, Y C Soh, Z G Li and C H Lai, *Two-stage impulsive control for the synchronization of chaotic systems*, presented at the *NDES 2004, 12th International IEEE Workshop on Nonlinear Dynamics of Electronic Systems*, Evora, Portugal, 9-13 May 2004.

14. S Guan and C H Lai, *Noise effect on generalized synchronization in chaotic systems*, in proceedings of Dynamics Day 2004, Palma de Mallorca, Spain, 13-17 September 2004

15. X Wang, C H Lai and Y C Lai, *Strange nonchaotic attractors in periodically driven systems*, in proceedings of *Dynamics Day 2004*, Palma de Mallorca, Spain, 13-17 September 2004

16. C H Lai, *Wavelets, chaos control and application to ecological and environmental modeling*, invited speaker at the *Regional Conference on Ecological and Environmental Modeling ECO-MOD 2004*, Penang, Malaysia, 15-16 September 2004. [Invited speaker]

17. Xiaofeng Gong and C H Lai, *Restoring chaotic signals from 'partial' information*, presented at *Second Shanghai International Symposium on Nonlinear Science and Applications SNSA'05*, Shanghai, China, 3-7 June 2005.

18. Shuguang Guan and C H Lai, *Bistable chaos without symmetry in generalized synchronization*, presented at *Second Shanghai International Symposium on Nonlinear Science and Applications SNSA'05*, Shanghai, China, 3-7 June 2005.

19. Kun Li, Xiaofeng Gong and C H Lai, *A secure communication system with chaotic symbolic synchronization*, presented at *Second Shanghai International Symposium on Nonlinear Science and Applications SNSA'05*, Shanghai, China, 3-7 June 2005.

20. Xingang Wang and C H Lai, *Construction of secure cryptosystems based on spatiotemporal chaos and its application in public channel cryptography*, presented at *Second Shanghai International Symposium on Nonlinear Science and Applications SNSA'05*, Shanghai, China, 3-7 June 2005.

21. Jiao Wang and C H Lai, *Symbolic analysis of noise-resistant chaotic synchronization*, presented at *Second Shanghai International Symposium on Nonlinear Science and Applications SNSA'05*, Shanghai, China, 3-7 June 2005.

22. Ying-Cheng Lai, Xingang Wang, and Choy-Heng Lai, *Physics of network security*, in *Proceedings of the International Symposium on Topological Aspects of Critical Systems and Networks*, Sapporo, Japan, 13-14 February 2006 (World Scientific Publishing Co., 2007)

23. X Feng, C H Oh, Z Wang, C Wu, L C Kwek and C H Lai, *Geometric phase and quantum computation*, presented at *KMITL International Conference on Science and Applied Science 2006*, Bangkok, Thailand, 8-10 March 2006.

24. J Wang and C H Lai, *Dynamical noise filtering in chaos synchronization*, Proceedings of the *International Conference on the Frontiers of Nonlinear and Complex Systems*, Hong Kong, 24-26 May 2006 (Int J Mod Phys **B21** (2007) 3393-3340). [Invited speaker]

25. C H Lai, *Dynamical consistency and chaos synchronization*, presented at *Dynamics Days Asia-Pacific 4: the Fourth International Conference on Nonlinear Science*, Pohang, Korea, 12-14 July 2006. [Invited speaker].

26. X Feng, Z Wang, C Wu, L C Kwek, C H Lai and C H Oh, *A scheme for unconventional geometric quantum computation in cavity QED*, presented at the Sixteenth Annual International Laser Physics Workshop (LPHYS'07), Leon, Mexico, 20-24 August 2007.

27. C H Lai, *Optimization of synchronization on gradient clustered networks*, presented at *Third Cross-Strait Conference on Statistical Physics*, Hangzhou-Jinghua, China, 12-15 November 2007. [Invited plenary speaker]

28. X Feng, C Wu, C H Lai and C H Oh, *Trapped ion quantum computation by adiabatic passage*, presented at *2nd International Workshop on Solid-State Quantum Computing and Mini-School on Quantum Information Science*, Taipei, Taiwan, 25-27 June 2008, in American Institute of Physics Conference Proceedings Series, Vol. 1074, *Solid-State Quantum Computing*, 54-55 (2008)

29. C H Lai, *Synchronization on gradient clustered networks*, presented at *Dynamics Days-Asia Pacific 5 [DDAP5], The 5th International Conference on Nonlinear Science*, Nara, Japan, 9-12 September 2008. [Invited speaker]

30. J Wang and C H Lai, *Detecting groups of similar components in complex networks*, presented at *The First International Conference on Complex Sciences: Theory and Applications* (COMPLEX'2009), Shanghai, China, 23-25 February 2009 [Invited speaker]

31. J Wang and C H Lai, *The symmetry principle in network partition problems*, presented at the Session on Complex Networks, *The Sixth Joint Meeting of Chinese Physicistis Worldwide (OCPA6) - International Conference on Physics Education and Frontier Physics*, Lanzhou, China, 3-7 August 2009

32. J Wang and C H Lai, *Network partition and detection of similar components in complex networks*, *The International Conference on Computational Physics (ICCP)*, Beijing, China, 17-20 May 2010 [Invited speaker]

33. J Wang and C H Lai, *Symmetry considerations in identifying network structures*, *Second International Workshop of Statistical Physics and Mathematics of Complex Systems*, Wuhan, China, 23-27 October 2010 [Invited speaker]

34. G Yan, J Ren, Y-C Lai, C-H Lai and B Li, *Controlling complex networks - energy cost considerations*, presented at Dynamics Days Asia Pacific 7 (DDAP7), the 7th International Conference on Nonlinear Science, Academic Sinica, Taipei, Taiwan, 6-9 August 2012 [Invited speaker]

35. S Yu, Q Chen, C Zhang, C H Lai and C H Oh, *Gisin's Theorem via Hardy's Inequality*, presented at the Asia Pacifici Conference & Workshop in Quantum Information Science, Putrajaya, Malaysia, 3-7 December 2012

36. N N Chung, L Y Chew and C H Lai, *Large-scale Connectivity vs. Spreading Efficiency: Spectral Analysis on Explosive Percolation*, presented at the NATO Advancecd Research Workshop "*New Challenges in Complex System Physics: Disaster forecasting, crisis modeling and sustainable development*", Samarkand, Uzbekistan, 20-24 May 2013 [Keynote speaker] in D Matrasulov and H E Stanley (eds.), *Nonlinear Phenomena in Complex Systems: From*

Nano to Macro Scale, NATO Science for Peace and Security Series C: Environmental Security, pp. 91-95, Springer Science+Business Media Dordrecht, 2014.

37. N N Chung, L Y Chew and C H Lai, *Influence of community structure on cooperative dynamics in coupled socio-ecological systems*, presented at the 2013 Summer Solstice International Conference on Discrete Models of Complex Systems, Warszawa, Poland, 17-19 June 2013

38. H S Sugiarto, N N Chung, L Y Chew and C H Lai, *Anticipating Critical Transitions in Coupled Socio-Ecological Networks*, Transitions in Discrete Choice, a satellite meeting at the European Conference on Complex Systems 2014, Lucca, Italy, 24 September 2014

39. H S Sugiarto, L Y Chew, N N Chung and C H Lai, *Complex Social Network Interactions in Coupled Socio-Ecological Systems: Multiple Regime Shifts and Early Warning Detection*, International Conference on Applied Physics, Simulation and Computers (APSAC 2015), Vienna, Austria, 15-17 March 2015
in Y Wang, P Borne, I Rudas (eds.), *New Developments in Computational Intelligence and Computer Science*, pp. 196-204, Institute for Natural Sciences and Engineering, USA, 2015

40. A Schauf and C H Lai, *A model of common-pool resource sustainability in populations with structural access inequalities*, 2016 Conference on Complex Systems, Amsterdam, The Netherlands, 19-22 September 2016