Hang-Chin Lai

Curriculum Vitae

Faculty of Science

National Tsing Hua University

Hsinchu, Taiwan 30013

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PERSONAL DATA

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	National Tsing Hua University,
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Nationality	Taiwan
Date of Birth	December 5, 1934

RESEARCH INTERESTS

♦ Mathematics Analysis　　♦ Optimization

♦ Convex Analysis　　♦ Optimal Control

♦ Harmonic Analysis　　♦ Functional Analysis

EDUCATION

Oct. 1967 – Oct. 1973　　Doctor of Science

Graduate School of Mathematics

Tohoku University, Japan

Mar. 1963 – Feb. 1965　　Master of Science

Graduate Institute of Mathematics

National Tsing Hua University, Taiwan

Sep. 1953 – Jun. 1957　　Bachelor of Science

Department of Mathematics

National Taiwan Normal University, Taiwan

PRESENT POSITIONS

Feb. 2006 – present　　Emeritus Chair Professor

Faculty of Science

National Tsing Hua University, Hsinchu, Taiwan

EXPERIENCE

Aug. 2006 – Jul. 2012	Chair Professor
	Department of Applied Mathematics
	Chung Yuan Christian University, Taoyuan, Taiwan
Feb. 2002 – Jul. 2006	Professor
	Department of Applied Mathematics
	Chung Yuan Christian University, Taoyuan, Taiwan
Aug. 1998 – Jan. 2002	Dean of Faculty of Science and Engineering
	I-Shou University, Kaohsiung, Taiwan
Aug. 1998 – Jan. 2002	Professor
	Department of Applied Mathematics
	I-Shou University, Kaohsiung, Taiwan
Aug. 1995 – Jul. 1998	Director of Academic Affair
	I-Shou University, Kaohsiung, Taiwan
Aug. 1992 – Jul. 1995	Professor
	Department of Applied Mathematics
	Tunghai University, Taichung, Taiwan
Jun. 1990 – Oct. 1992	Chair Professor
	Department of Mathematics
	University of Cape Town, Western Cape, South Africa
Aug. 1987 – Jun. 1988	Professor
	Department of Mathematics
	University of Iowa, Iowa, America
Jan. 1983 – Mar. 1983	Visiting Professor
	Department of Mathematics
	National University of Singapore, Singapore, Singapore
Apr. 1982 – Jun. 1982	Visiting Professor
	Department of Mathematics
	Niigata University, Niigata, Japan
Aug. 1981 – Mar. 1982	Adjunct Professor
	Department of Mathematics
	Hokkaido University, Hokkaido, Japan

Aug. 1973 − Feb. 1992	Professor
	Department of Mathematics
	National Tsing Hua University, Hsinchu, Taiwan
Aug. 1970 − Jul. 1973	Associate Professor
	Department of Mathematics
	National Tsing Hua University, Hsinchu, Taiwan
Feb. 1965 − Jul. 1970	Instructor
	Department of Mathematics
	National Tsing Hua University, Hsinchu, Taiwan
Aug. 1962 − Jan. 1963	Teaching Assistant
	Department of Mathematics
	National Taiwan Normal University, Taipei, Taiwan
Aug. 1957 − Mar. 1962	Mathematics Teacher
	National Chia-Yi Girls' Senior High School, Chiayi, Taiwan

HONORS

1987   Outstanding Teaching Professor Prize

National Tsing Hua University, Taiwan

1985   National Academic Prize in Science Division

Ministry of Education, House of Administration of Taiwan

1984   Golden Cauldron Prize

Bureau of News, House of Administration of Taiwan

1983   Chung-Shan Academic Prize in Math Science

Chung-Shan Academic Foundation

1974   Hsu-Shi Science Prize

Hsu-Shi Science Foundation

1970   Chung-Shan Academic Prize in Math Science

Chung-Shan Academic Foundation

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

August, 2014	Invited speaker,
	2013 RIMS Workshop on Nonlinear Analysis and Convex Analysis,
	Kyoto University, Kyoto, Japan.
August, 2014	Invited speaker,
	ICM Satellite Conference 2014: The Fourth Asian Conference on Nonlinear
	Analysis and Optimization,
	National Taiwan Normal University, Taipei, Taiwan.
December, 2013	Invited speaker,
	The International Conference on Nonlinear Analysis and Optimization,
	National Sun Yat-sen University, Kaohsiung, Taiwan.
October, 2013	Invited speaker,
	2013 RIMS Workshop on Nonlinear Analysis and Convex Analysis,
	Kyoto University, Kyoto, Japan.
August, 2013	Invited speaker,
	The Eighth International conference on Nonlinear Analysis and Convex
	Analysis, Hirosaki University, Aomori, Japan.
January, 2013	Invited speaker,
	International symposium on Nonlinear Analysis and Optimization,
	Pukyong National University, Busan, Korea.
December, 2012	Invited speaker,
	Mathematical Conference and Annual Meeting of the Taiwan Mathematical
	Society 2012, National Chiao Tung University, Hsinchu, Taiwan.
November, 2012	Invited speaker,
	Workshop on Nonlinear Analysis and Optimization,
	National Taiwan Normal University, Taipei, Taiwan.
November, 2012	Invited speaker,
	Workshop on Nonlinear Analysis and Optimization,
	Army Academy R.O.C., Taoyuan, Taiwan.
September, 2012	Invited speaker,
	The Third Asian Conference on Nonlinear Analysis and Optimization,
	Shimane, Japan.

August, 2012	Invited speaker,
	International Workshop on Nonlinear Convex Analysis, RIMS 2012,
	Kyoto University, Kyoto, Japan.
July, 2012	Invited speaker,
	The Eleventh Workshop on Numerical Ranges and Numerical Radii,
	National Sun Yat-sen University, Kaohsiung, Taiwan.
June, 2012	Invited speaker,
	Optimization Seminar,
	National Cheng Kung University, Tainan, Taiwan.
March, 2012	Invited speaker,
	Optimization Seminar,
	National Taiwan University, Taipei, Taiwan.
February, 2012	Invited speaker,
	International Symposium on Nonlinear Analysis and Optimization,
	Pukyong National University, Busan, Korea.
January, 2012	Invited speaker,
	Workshop on Mathematics Analysis,
	National Changhua University of Education, Changhua, Taiwan.
December, 2011	Session organizing for Analysis and Optimization,
	Workshop on Nonlinear Analysis and Optimization Theory, Method and Applications, Hsinchu, Taiwan.
December, 2011	Organizing committee,
	Mathematical Conference and Annual Meeting of the Taiwan Mathematical Society, Taoyuan, Taiwan.
December, 2011	Invited speaker,
	Workshop on Nonlinear Analysis and Optimization, Niigata, Japan.
December, 2011	Invited speaker,
	The 5th China-Australia Workshop on Optimization Theory, Methods and Applications, Shanghai, China.
November, 2011	Invited speaker,
	Workshop on Fixed Point Theory, Optimization and their Applications, Kaohsiung, Taiwan.
November, 2011	Invited speaker,

	Workshop on Nonlinear Analysis and Optimization, Taipei, Taiwan.
August, 2011	Invited speaker,
	Symposium on Nonlinear Analysis and Convex Analysis, Kyoto, Japan.
August, 2011	Invited speaker,
	International Symposium on Generalized Convexity and Monotonicity, Cluj-Napoca, Romania, 2011.
August, 2011	Invited speaker,
	International Conference on Nonlinear Analysis and Convex Analysis, Busan, Korea.
March, 2011	Invited speaker,
	International Symposium on Nonlinear Analysis and Convex Analysis, Hualien, Taiwan.
February, 2011	Invited speaker,
	International Symposium on Nonlinear Analysis and Optimization, Busan, Korea.
December, 2010	Invited speaker,
	International Conference on Optimization: Techniques and Applications, Shanghai, China.
August, 2010	Invited speaker,
	Symposium on Nonlinear Analysis and Convex Analysis, Kyoto, Japan.
August, 2010	Invited speaker,
	International Conferences on Finite or Infinite Dimensional Complex Analysis and Applications, Macau, China.
February, 2010	Invited speaker,
	International Conferences on Optimization and its Applications, Varanasi, India.
February, 2010	Invited speaker,
	Training Program, Delhi, India.
February, 2010	Invited speaker,
	International Symposium on Nonlinear Analysis and Optimization, Busan, Korea.

PUBLICATIONS - PREVIEW ARTICLES

1. *A new characterization of minimax identity problem in a two-person zero-sum dynamic game system*, with J.T. Liu, RIMS Kôkyûroku, 2014. (Accepted!)

2. *Duality in minimax programming with second order* (F, ρ)-*convexity*, with S.C. Ho, Journal of Industrial Management Optimization, 2014.

PUBLICATIONS - REFEREED JOURNAL ARTICLES

1. *Mixed type duality for a nondifferentiable minimax fractional complex programming*, with T.Y. Huang, Pacific Journal of Optimization, 10(2), 305–319 2014.

2. *Mixed type duality on nonsmooth minimax fractional programming involving exponential* (p,r)-*invexity*, with S.C. Ho, Numerical Functional Analysis and Optimization, 35(11) : 1–19, 2014.
(DOI: 10.1080/01630563.2014.895754, published online: 28 Feb, 2014.)

3. *Duality for nonsmooth minimax fractional programming with exponential* (p,r)-*invexity*, with S.C. Ho, Journal of Nonlinear and Convex Analysis, 15(4) : 711–725, 2014.

4. *New quasi-coincidence point polynomial problems*, with Y.C. Chen, Journal of Applied Mathematics, 2013 : 959464, 2013.
(DOI: 10.1155/2013/959464, Hindawi Publishing Corporation, published online: 10 July, 2013.)

5. *A non NP-complete algorithm for a quasi-fixed polynomial problem*, with Y.C. Chen, Abstract and Applied Analysis, 2013 : 893045, 2013.
(DOI: 10.1155/2013/893045, Hindawi Publishing Corporation, published online: 24 February, 2013.)

6. *Minimax programming problem with complex variables*, with C.T. Liu, **RIMS Kôkyûroku**, 1841 : 1–7, 2013. (ISSN 1880-2818, Kyoto University)

7. *Minimax theorem of the ratio of expectation for a two-person zero-sum dynamic game*, with C.Y. Yu, Journal of Nonlinear and Convex Analysis, 14(1) : 89–101, 2013.

8. *Nonsmooth minimax fractioinal programming problem with exponential (p,r)-invexity*, with J.T. Liu, RIMS Kôkyûroku, 1821 : 1–9, 2013. (ISSN 1880-2818, Kyoto University)

9. *Minimax theorems for set-valued mappings under cone-convexities*, with Y.C. Lin and Q.H. Ansari, Abstract and Applied Analysis, 2012 : 310818, 2012.
   (DOI: 10.1155/2012/310818, Hindawi Publishing Corporation, published online: 18 December, 2012.)

10. *Minimax theorem on a two-person zero-sum dynamic game*, with C.Y. Yu, Journal of Nonlinear and Convex Analysis, 13(4) : 709–720, 2012.

11. *Duality on a nondifferentiable minimax fractional programming*, with H.M. Chen, Journal of Global Optimization, 54 : 295–306, 2012.
    (DOI: 10, 100 7/s-10898-010-9631-8, Springer, published online: 18 December, 2010.)

12. *Optimality and duality for nonsmooth minimax fractional programming problem with exponential (p,r)-invexity*, with S.C. Ho, Journal of Nonlinear and Convex Analysis, 13(3) : 433–447, 2012.

13. *Nondifferentiable minimax fractional programming in complex spaces with parametric duality*, with T.Y. Huang, Journal of Global Optimization, 53(2) : 243–254, 2012.
    (DOI 10.1007/s10898-011-9680-7, Springer, published online: 18 February, 2010.)

14. *Optimality and duality for nonsmooth multiobjective fractional programming problems involving exponential V-r-invexity*, with S.C. Ho, Nonlinear Analysis, 75 : 3157–3166, 2012.

15. *Duality for a system of multiobjective problems with exponential type invexity functions*, with S.C. Ho, Journal of Nonlinear and Convex Analysis, 13(1) : 97–110, 2012.

16. *Approximate solutions and error bounds for a class of continuous time linear programming problems*, with C.F. Wen and Y.Y. Lur, Optimization, 61(2) : 163–185, 2012.
    (DOI: 10.1080/02331934.2011.562292, Taylor & Francis, published online: 18 July, 2011.)

17. *A variational problem and optimal control*, with J.C. Lee and S.J. Chern, Journal of Industrial and Management Optimization, 7(4) : 967–975, 2011.

18. *Quasi-fixed polynomial for vector-valued polynomial functions on $\mathbb{R}^n \times \mathbb{R}$*, with Y.C. Chen, Fixed Point Theory (Romania), 12(2) : 391–400, 2011.

19. *A new characterization on optimality and duality for nondifferentiable minimax fractional programming problems*, with J.C. Liu, Journal of Nonlinear and Convex Analysis, 12(1) : 69–80, 2011.

20. *Complex analysis methods related an optimization problem with complex variables*, with T.Y. Huang, European Journal of Pure and Applied Mathematics, 3(6) : 989–1005, 2010.

21. *A quasi-fixed polynomial problem for a polynomial function*, with Y.C. Chen, Journal of Nonlinear and Convex Analysis, 11(1) : 101–114, 2010.

22. *Optimality conditions for nondifferentiable minimax fractional programming with complex variables*, with T.Y. Huang, Journal of Mathematical Analysis and Applications, 359 : 229–239, 2009.

23. *Optimality conditions for a nondifferentiable minimax programming in complex spaces*, with T.Y. Huang, Nonlinear Analysis, 71 : 1205–1212, 2009.

24. *Duality for nondifferentiable minimax programming in complex spaces*, with J.C. Liu, Nonlinear Analysis, 71(12) : 224–233, 2009.

25. *Optimization theory for set functions in nondifferentiable fractional programming with mixed type duality*, with T.Y. Huang and S. Schaible, Taiwanese Journal of Mathematics, 12(8) : 2031–2044, 2008.

26. *Minimax fractional programming for n-set functions and a mixed type duality under generalized invexity*, with T.Y. Huang, Journal of Optimization Theory and Applications, 139 : 295–313, 2008.

27. *Complex minimax fractional programming of analytic functions*, with J.C. Liu and S. Schaible, Journal of Optimization Theory and Applications, 137 : 171–184, 2008.

28. *Duality of fractional integral programming with generalized invexity*, RIMS Kôkyûroku, 1544 : 111–118, 2007.

29. *Sufficiency and duality of variational fractional programming with generalized invexity*, Taiwanese Journal of Mathematics, 10(6) : 1685–1695, 2006.

30. *Parametric duality on minimax programming involving generalized convexity in complex spaces*, with J.C. Lee and S.C. Ho, Journal of Mathematical Analysis and Applications, 323 : 1104–1115, 2006.

31. *Mixed type duality in mathematical programming involving generalized convex set functions*, RIMS Kôkyûroku, 1415 : 1–10, 2005.

32. *Complex fractional programming and the Charnes-Cooper transformation*, with J.C. Chen and S. Schaible, Journal of Optimization Theory and Applications, 126(1) : 203–213, 2005.

33. *Parameter-free dual models for fractional programming with generalized invexity*, with J.C. Lee, Annals of Operations Research, 133 : 47–61, 2005.

34. *Optimality conditions for minimax programming of analytic functions*, with J.C. Chen, Taiwanese Journal of Mathematics, 8(4) : 673–686, 2004.

35. *On a dynamic fractional game*, Journal of Mathematical Analysis and Applications, 294 : 644–654, 2004.

36. *Fractional programming for variational problem with (F, ρ, θ)-invexity*, Journal Nonlinear and Convex Analysis, 4(1) : 25–41, 2003.

37. *Minimax fractional programming involving generalized invex functions*, with J.C. Liu, Australian and New Zealand Industrial and Applied Mathematics Journal, 44 : 339–354, 2003.

38. *Optimization Analysis involving set functions*, with J.C. Chen, Applied Mathematics E-Notes, 2 : 78–97, 2002.

39. *Nondifferentiable fractional programming in complex spaces involving (L, ρ, θ)-convex analytic functions*, with J.C. Liu, Indian Journal of Pure and Applied Mathematics, 33 : 917–932, 2002.

40. *On duality theorems for a nondifferentiable minimax fractional programming*, with J.C. Lee, Journal of Computational and Applied Mathematics, 146 : 115–126, 2002.

41. *On a dynamic fractional game*, RIMS Kôkyûroku, , 1298 : 151–160, 2002.

42. *Complex fractional programming involving generalized quasi/pseudo convex functions*, with J.C. Liu, Zeitschrift für Angewandte Mathematik und Mechanik, 82 : 159–166, 2002.

43. *Duality for fractional complex programming with generalized convexity*, with J.C. Lee and J.C. Liu, Journal of Nonlinear and Convex Analysis, 2 : 175–191, 2001.

44. *Semilocally convex programming in ordered vector spaces*, with J.C. Lee, Tamsui Oxford Journal of Mathematical Sciences, 16(2) : 151–168, 2000.

45. *On minimax fractional programming of generalized convex set functions*, with J.C. Liu, Journal of Mathematical Analysis and Applications, 244 : 442–465, 2000.

46. *Necessary and sufficient conditions for minimax fractional programming*, with J.C. Liu and K. Tanaka, Journal of Mathematical Analysis and Applications, 230 : 311–328, 1999.

47. *Duality for a minimax programming problem containing n-set function*, with J.C. Liu, Journal of Mathematical Analysis and Applications, 229 : 587–604, 1999.

48. *Duality without a constraint qualification for minimax fractional programming*, with J.C. Liu and K. Tanaka, Journal of Optimization Theory and Applications, 101(1) : 109–125, 1999.

49. *Generalized gradients and mean value theorems in Banach space*, withJ .W. Chen and P.C. Liu, Far East Journal of Mathematical Sciences, 1(1) : 1–16, 1999.

50. *Integral functional and Euler-Lagrange inclusion*, RIMS Kôkyûroku, 1031 : 14–28, 1998.

51. *Variational problem related optimal control*, with J.W. Chen, Proceedings of the National Science Council (Part A: Physical Science and Engineering), 22(2) : 163–170, 1998.

52. *Optimality conditions for multiobjective programming with generalized (τ, ρ, θ)-convex set functions*, with J.C. Liu, Journal of Mathematical Analysis Applications, 215 : 443–460, 1997.

53. *Optimality conditions of semi-invex programming*, Taiwanese Journal of Mathematical, 1(4) : 389–404, 1997.

54. *On the generalized Euler-Lagrange equations*, with J.W. Chen, Journal of Mathematical Analysis Applications, 213 : 681–697, 1997.

55. *Multiobjective programming of set functions*, RIMS Kôkyûroku, 985 : 118–131, 1997.

56. *Upper limit of sets and continuous mappings*, with J.C. Lee, Far East Journal of Mathematical Sciences, 5(4) : 505–514, 1997.

57. *Moreau-Rockafellar type theorems for nonconvex and non-locally Lipschitz integral functional on $L^p(T,X)$*, with J.W. Chen, Optimization, 39 : 103–122, 1997.

58. *Moreau-Rockafellar model type theorems for generalized subgradient operators*, with J.W. Chen, Nihonkai Mathematical Journal, 7(2) : 155–176, 1996.

59. *Mathematical model on vector-valued decision systems*, Tunghai Science, 36(2) : 117–125, 1995.

60. *Multipliers in vector-valued function spaces under convolution*, with J.C. Candeal, Acta Mathematica Hungarica, 67(3) : 175–192, 1995.

61. *On p-summable functional representations for linear operators*, Soochow Journal Mathematical, 20(4) : 489–505, 1994.

62. *Linear programming in measure spaces*, Optimization, 29 : 141–156, 1994.

63. *Alternative theorems and saddlepoint results for convex programming problems of set function with values in ordered vector spaces*, with P. Szilagyi, Acta Mathematica Hungarica, 63(3) : 231–241, 1994.

64. *Optimization for integral functions and Euler-Lagrange*, Tunghai Science, 34 : 821–836, 1993.

65. *Convergent theorems and L^p-selections for Banach-valued multifunctions*, with J.C. Lee, Nihonkai Mathematical Journal, 4(2) : 163–180, 1993.

66. *Integration theory for Banach-valued multifunctions*, with J.C. Lee, Indian Journal of Mathematics, 34 : 265–284, 1992.

67. *Multipliers in continuous vector-valued function spaces*, with J.C. Candeal, Bulletin Australian Mathematical Society, 46(2) : 199–204, 1992.

68. *On linear semi-infinite programming problems: An algorithm*, with S.Y. Wu, Numerical Functional Analysis and Optimization, 13 : 3–4, 1992.

69. *Some properties of Fourier transform for operators on homogeneous Banach spaces*, with C.H. Chen, Hokkaido Mathematical Journal, 21 : 259–271, 1992.

70. *Extremal points and optimal solutions for general capacity problems*, with S.Y. Wu, Mathematical Programming (Series A), 54 : 87–113, 1992.

71. *Optimality conditions for Lipschitz functions on Banach space*, Nihonkai Mathematical Journal, 2 : 99–115, 1991.

72. *Average-time criterion for vector-valued Markovian decision systems*, with K. Tanaka, Nihonkai Mathematical Journal, 2 : 71–91, 1991.

73. *On continuous-time discounted stochastic dynamic programming*, with K. Tanaka, Journal of Applied Mathematics & Optimization, 23 : 155–169, 1991.

74. *Optimization for integral functionals*, Numerical Functional Analysis and Optimization, 10 : 1139–1159, 1989.

75. *Optimality for set functions with values in ordered vector spaces*, with L.J. Lin, Journal of Optimization Theory and Applications, 63 : 371–389, 1989.

76. *A necessary and sufficient condition of convex multiobjective programming*, with J.C. Liu, Tamkang Journal Mathematics, 20(1) : 7–17, 1989.

77. *Strong duality for infinite-dimensional vector-valued programming problems*, with L.S. Yang, Journal of Optimization Theory and Applications, 62 : 449–466, 1989.

78. *Multipliers and translation invariant operators*, with T.K. Chang, Tohoku Mathematics Journal, 41 : 31–41, 1989.

79. *Moreau-Rockafellar type theorem for convex set functions*, with L.J. Lin, Journal Mathematics Analysis Applications, 132 : 558–571, 1988.

80. *The Fenchel-Moreau theorem for set functions*, L.J. Lin, Proceedings of the American Mathematical Society, 103(1) : 558–571, 1988.

81. *An N-person noncooperative discounted vector-valued dynamic game with a metric space*, with K. Tanaka, Applied Mathematics & Optimization, 16 : 135–146, 1987.

82. *A vector-minimization problem in a stochastic continuous-time n-person game*, with K. Tanaka, Journal Nonlinear and Convex Analysis, 107 : 151–165, 1987.

83. *An n-person noncooperative discounted vector valued dynamic game with a stopped set*, with K. Tanaka, Journal Computational Mathematics Applications, 13(1–3) : 227–237, 1987.

84. *On the linear algebra of generalized stochastic matrices and their equivalent relation and permutation basis*, Japan Journal Applications Mathematics, 3(2) : 367–379, 1986.

85. *Secant method for operator equations on Banach space*, with C.Y. Lee, Mathematics Japonica, 31(5) : 721–739, 1986.

86. *Duality theorem of nondifferentiable convex multiobjectiver programming*, with C.P. Ho, Journal of Optimization Theory and Applications, 50(3) : 407–420, 1986.

87. *On the multipliers of the p-class Banach algebras in H*-algebra*, withY.C. Yeh, Tamkang Journal of Mathematics, 17 : 71–85, 1986.

88. *On a D-convex solution of a cooperative m-person discounted Markov game*, with K. Tanaka, Journal of Mathematical Analysis and Applications, 115 : 578–591, 1986.

89. *Duality of Banach function spaces and Radon Nikodym property*, Acta Mathematica Hungarica, 47(1–2) : 45–52, 1986.

90. *Multipliers of Banach valued function spaces*, Journal Australian Mathematics Society (Series A), 39 : 51–62, 1985.

91. *Convex programming on spaces of measurable functions*, with S. Koshi and N. Komuro, Hokkaido Mathematical Journal, 14 : 75–84, 1985.

92. *Multipliers for some spaces of Banach algebra valued functions*, Rocky Mountain Journal of Mathematics, 15 : 157–166, 1985.

93. *On an n-person noncooperative Markov game with a metric state space*, with K. Tanaka, Journal of Mathematical Analysisand and Applications, 101 : 78–96, 1984.

94. *A noncooperative n-person semi-Markov game with a separable metric state space*, with K. Tanaka, Applied Mathematics & Optimization, 11 : 23–42, 1984.

95. *Conjugate operators and subdifferentials for convex operators in ordered vector spaces*, Soochow Journal of Mathematics, 9 : 127–135, 1983.

96. *Duality in mathematical programming of set functions: On Fenchel duality theorem*, with S.S. Yang and G.R. Hwang, Journal of Mathematical Analysis and Applications, 95 : 233–234, 1983.

97. *A note on non-cooperative N-person game with a stopped set*, with T.S. Cheng, Soochow Journal of Mathematics, 8 : 31–36, 1982.

98. *Multiplier algebra of C*-envelope and the C*-envelope of a multiplier algebra*, Proceedings of the Japan Academy (Series A), 58 : 365–368, 1982.

99. *Error bounds of Newton type process on Banach spaces*, with P.Y. Wu, Numerische Mathematik, 39 : 175–193, 1982.

100. *Saddle point and duality in the optimization theory of convex set functions*, with S.S. Yang, Journal of the Australian Mathematical Society (SeriesB), 24 : 130–137, 1982.

101. *A two-person zero-sum Markov game with a stopped set*, with K. Tanaka, Journal of Mathematical Analysis and Applications, 86 : 54–68, 1982.

102. *Non-cooperative n-person game with a stopped set*, with K. Tanaka, Journal of Mathematical Analysis and Applications, 85 : 153–171, 1982.

103. *The ranges of set functions*, with S. Koshi, Hokkaido Mathematical Journal, 10 : 348–360, 1981.

104. *Harmonic analysis on the Fourier algebras $A_{1,p}(G)$*, with I.S. Chen, Journal of Australian Mathematical Society (Series A), 30 : 438–452, 1981.

105. *Numerical ranges of the tensor products of elements*, with F.B. Yeh, Hokkaido Mathematical Journal, 7 : 214–223, 1978.

106. *Unique continuation for symmetric hyperbolic systems of first order with discontinuous coefficients*, Yokohama Mathematical Journal, 26 : 61–68, 1978.

107. *Banach algebras which are ideals in a Banach algebra*, Bulletin of the Institute of Mathematics Academia Sinica, 3 : 383–389, 1975.

108. *Multipliers of Lorentz spaces*, with Y.K. Chen, Hokkaido Mathematical Journal, 4 : 248–260, 1975.

109. *Restrictions of Fourier transforms on A^p*, Tohoku Mathematical Journal, 26 : 453–460, 1974.

110. *Multipliers of a Banach algebra in the second conjugate algebra as an idealizer*, Tohoku Mathematical Journal, 26 : 431–452, 1974.

111. *Estimations of maximal operators for fractional order K*, with L.J. Lin, Tamkang Journal of Mathematics, 4 : 175–186, 1973.

112. *Isomorphism theorem of the spaces $L^p(G)$*, with M.C. Lien, Chinese Journal of Mathematics, 1 : 167–173, 1973.

113. *The Fourier transformations of closed operators on a dense subspace of $L^1(G)$*, Mathematica Japonicae, 17 : 135–147, 1972.

114. *Exponential decay of weak solutions for hyperbolic systems of first order with discontinuous coefficients*, Transactions of the American Mathematical Society, 170 : 425–436, 1972.

115. *A characterization of the multipliers of Banach algebra*, Yokohama Mathematical Journal, 20 : 45–50, 1972.

116. *On the multipliers of $A^p(G)$-algebras*, Tohoku Mathematical Journal, 23 : 641–662, 1971.

117. *Remarks on $A^p(G)$-algebras*, Proceedings of the Japan Academy, 46 : 58–63, 1970.

118. *On the category of $L^1 \cap (G)L^p(G)$ in $A^q(G)$*, Proceedings of the Japan Academy, 45 : 577–581, 1969.

119. *On some properties of $A^p(G)$-algebras*, Proceedings of the Japan Academy, 45 : 572–576, 1969.

PUBLICATIONS - PROCEEDINGS ARTICLES

1. *Mixed type duality for a nondifferentiable minimax fractional complex programming*, with T.Y. Huang, Proceedings of the Third Asian Conference on Nonlinear Analysis and Optimization, 211–217, 2014.
   (Matuse, Japan, 2012, ISBN: 978-4-946552-49-6, Yokohama Publishers)

2. *Mixed type duality for nonsmooth minimax fractional programming involving exponential (p,r)-invexity*, with S.C. Ho, Proceedings of the Third Asian Conference on Nonlinear Analysis and Optimization, 63–72, 2014.
   (Matuse, Japan, 2012, ISBN: 978-4-946552-49-6, Yokohama Publishers)

3. *A rational quasi-fixed (point) polynomial problem*, with C.Y. Chen, Proceedings of the Third Asian Conference on Nonlinear Analysis and Optimization, 35–40, 2014.
   (Matuse, Japan, 2012, ISBN: 978-4-946552-49-6, Yokohama Publishers)

4. *Optimality conditions for multiobjective fractional programming and parametric duality exponential V-r-invexity*, with S.C. Ho, Proceedings of the 7th International Conference on Nonlinear Analysis and Convex Analysis I, 313–319, 2013.
   (Busan, Korea, 2011, Yokohama Publishers)

5. *Quasi-fixed polynomial solutions of real-valued polynomial equation*, with Y.C. Chen, Fixed Point Theory and its Applications, Changhua, Taiwan, 27–37, 2010.

6. *Duality on a nondifferentiable minimax fractional programming*, with H.M. Chen, Lecture Notes in Decision Sciences - Global Optimization: Theory, Methods & Applications I, 12(A) : 81–86, 2009.

7. *Optimization theory for set functions related to duality theorems on fractional set functions*, 37th Annual Iranian Mathematics Conference, 586–589, 2006.

8. *Fractional programming for variational problem with generalized invexity*, Proceedings of the 2nd International Conference on Nonlinear Analysis and Convex Analysis, Aomori, Japan, 247–255, 2003.

9. *Conditions for zero duality gap of nonconvex programming*, with J.C. Chen, Proceedings of the 6th World Multiconference on Systemics, Florida, America, 16 : 1–6, 2002.

10. *Programming problem involving generalized convex set functions*, Proceedings of the International Conference on Nonlinear Analysis and Convex Analysis, Niigata, Japan, 34–43, 1999.

11. *Subdifferential and conjugate functions for integral functionals*, Proceedings of the International Workshop in Analysis Its Applications, Novi Sad, Yugoslavia, 205–271, 1991.

12. *Generalized gradient for integral functionals*, Proceedings of International Symposium on Functional Analysis and Related Topics, Japan, 117–126, 1991.

13. *Differentiability and duality for integral functions*, Proceedings of the International Conference on Nonlinear Functional Analysis and Its Applications, Taipei, Taiwan, 61–83, 1991.

14. *Translation invariant operators and multipliers of Banach-valued function spaces*, Proceedings of analysis Conference, Singapore, Singapore, 151–162, 1988.

15. *The extremal identity of a dual programming for convex operators in ordered complete Riesz space*, Proceedings National Science Council, 10(2) : 117–122, 1986.

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DOCTOR COMMITTEES

Advisee	Degree	School	Year
Jen-Tang Liu		Chung Yuan Christian University	Enrollment
Cheng-Te Liu		Chung Yuan Christian University	Enrollment
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Tone-Yau Huang	Ph. D.	Chung Yuan Christian University	2009
Jia-Wen Chen	Ph. D.	National Tsing Hua University	1991
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Lai-Ju Lin	Ph. D.	National Tsing Hua University	1986

MASTER COMMITTEES

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Ta-Yu Ho	Master	Chung Yuan Christian University	2013
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Chih-Sheng Hung	Master	Tunghai University	1997
Tao-Ping Huang	Master	National Tsing Hua University	1996
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Xing-Xin Dai	Master	National Tsing Hua University	1991
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