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Education

State Univ. of New York at Buffalo	Ph.D, Human Factors in Industrial Eng.	1990
State Univ. of New York at Buffalo	M.S., Industrial Eng	1987
Tunghai Univ.,Taiwan	B.S., Industrial Eng	1985

Postgraduate Seminars and Training Programs

Harvard Business School	Case Method and Participant-Center Learning	2006 Jan
Babson University	Teaching entrepreneurial thought and action	2013 Mar

Research Interests

- Accident analysis & prevention
- Safety Management
- Human-Machine Interface
- Job analysis & accommodation
- Aging & disabled workers
- Visual Performance

Academic Positions

Since 2019	Board member	Taiwan Transportation Safety Board
2016-2019	Vice Chairman	Aviation Safety Council
2016	Visiting Professor	Hong Kong University of Science & Technology
Since 2012	Distinguished Professor	National Taiwan University of Science & Technology
2013 -2016	Director	Center for teaching & learning
2011 –2013	Dean of International Affairs	International Office
2010 -2011	Associate Dean	Management School
2008 -2010	Department chair	Industrial Management
2006	Visiting Professor	Iowa State University
1998- 2012	Professor	National Taiwan University of Science & Technology
1990 –1998	Associate Professor	National Taiwan University of Science & Technology

Professional Service

Since 2015	Editor Board	Applied Ergonomics (SCI Journal)
Since 2009	Editor Board f	International Journal of Industrial Ergonomics (SCI Journal)
Since 2016	Associate Editor	Journal of Labor, Occupational Safety and Health
2005-2008	Senior Editor	Journal of the Chinese Institute of Industrial Engineer (EI)
2003 –2005	President	for Ergonomics Society of Taiwan

Honor

2018	Excellence in Research Award of NTUST
2016	Fellow, Ergonomic Society of Taiwan
2020, 2012, 2008,	Research awards of NTUST
2006	Excellence in Teaching Award of NTUST

Journal Publications

Accident analysis

1. Chi, C.-F., Sigmund, D., Astardi, M. O. (2020) Classification Scheme for Root Cause and Failure Modes and Effects Analysis (FMEA) of Passenger Vehicle Recalls. *Reliability Engineering and System Safety.* (200), 106929
2. Chi, C.-F., Lin, S.-Z. (2018) Classification Scheme and Prevention Measures for Caught-in Between Occupational Fatal Accidents. *Applied Ergonomics*. 68, 338-348. (SCI)
3. Chi, C.-F., Chen, P.-L.; Saleh, W.; Tsai, S.-H., Pai, C.-W. (2019) Helmet non-use by users of bikeshare programs, electric bicycles, racing bicycles, and personal bicycles: An observational study in Taipei, Taiwan. International Journal of Sustainable Transportation. 18(2) doi.org/10.1080/15568318.2018.1441470 (SSCI)
4. Chi, C.-F., Lin, S.-Z., Dewi, R. S. (2014) Graphical fault tree analysis for fatal falls in the construction industry *Accident Analysis and Prevention* 72 (2014) 359–369.(SSCI)
5. Chi, C.-F. (2016) Chapter 26 Accident Causes and Prevention Measures for Fatal Occupational Falls in the Construction Industry in Fall Prevention and Protection: Principles, Guidelines, and Practices. Hsiao, H. (Ed) CRC Press ISBN 9781482217148
6. Chi, C.-F., Lin, Y.-Y., & Ikhwan, M. (2012) Flow Diagram Analysis of Electrical Fatalities in the Construction Industry, *Safety Science.* 50, 1205-1214. (SCI)
7. Djonaedi, E, Chi, C.-F., Dianawati, F. Yuri M., Zagloel, Y. M. (2012) The development of a database program for fatal electrocution and fatal fall accidents in construction industry, International Journal of Technology, 1, 67-76. (EI)
8. Chi, C. F., Yang, C.-C. and Chen, Z.-L. (2009) In-Depth Accident Analysis of Electrical Fatalities in the Construction Industry. International Journal of Industrial Ergonomics, (39) 635–644. (SCI)
9. Chi, C. F., Chang, T. C. and Tsou, C. L. (2006) In-Depth Investigation of Escalator Riding Accidents in Heavy Capacity MRT Stations, *Accident Analysis & Prevention*, 38, 662-670. .(SSCI)
10. Chi, C. F., Chang, T. C. and Ting, H. I. (2005) Accident Patterns and Prevention Measures for Fatal Occupational Falls in the Construction Industry, *Applied Ergonomics*.36, 391-400. (SCI)
11. Chi, C. F., Chang, T. C. and Hung, K. H. (2004) Significant industry-source of injury-accident type for occupational fatalities in Taiwan, *International Journal of Industrial Ergonomics*, 34, 77-91.(SCI)
12. Chi, C. F., and Chen, C. L. (2003)"Reanalyzing occupational fatality injuries in Taiwan with a model free approach", *Safety Science*, 41, 681-700.(SCI)
13. Chi, C. F., Chen, C. L., Lin, T. Y. (2001) Risk for occupational injury of handicapped workers in Taiwan, *Perceptual & Motor Skills*, 93, 89-94.(SSCI)
14. Chi, C. F., and Wu, M. L. (1997) Fatal occupational injuries in Taiwan –relationship between fatality rate and age, *Safety Science.* **27,** 1-17.(SCI)

Human computer interaction

15. Chi, C.-F., Dewi, R. S.,Samali, P., Hsieh, D.Y. (2019, Nov). Preference Ranking Test For Different Icon Design Formats For Smart Living Room and Bathroom Functions. *Applied Ergonomics*, 81, 102891
16. Chi, C.-F., Dewi, R. S., Surbakti, Y. Y., Hsieh, D.Y. (2017) The Perceived Quality of In-vehicle Auditory Signals: A Structural Equation Modeling Approach. Ergonomics. 60(11):1471-1484. (SCI)
17. Chi, C.-F., Dewi, R. S., Huang, M. H.(2017) Psychophysical Evaluation of Auditory Signals in Passenger Vehicles. *Applied Ergonomics*. 45, 904-916. (SCI)

18. Chi, C.-F., Dewi, R. S. (2014)" Matching performance of vehicle icons in graphical and textual formats", Applied Ergonomics, 45, 904-916. .(SCI)
19. Chi, C.-F., Tseng, L.-K., Jang, Y. (2012) Prune a decision tree of selecting computer-related assistive devices for the disable user, *IEEE Transactions on Neural Systems & Rehabilitation Engineering* 20(4):564-573 (SCI)
20. Chi, C. F., Cai, D. and You, M. (2003) Applying Image Descriptors to the Assessment of Legibility in Chinese Characters, *Ergonomics*, 46(8), 825-841.(SCI)
21. Hung, S.M. Shieh, K. K. Chi,C. F. (2002) Factors affecting the design of computer icons. International Journal of Industrial Ergonomics, 29, 211-218.(SCI)
22. Chi, C. F., Lan, W. S. and Tsai, J. R. (2000) Deriving And Analyzing Performance Strategy In A Two-Dimensional Drawing Task. *International Journal of Industrial Ergonomics*, 25, 393-404.(SCI)
23. Cai, D. , Chi, C. F., and You, M. (2000) The Legibility Threshold of Chinese Characters in Three Type Styles, *International Journal of Industrial Ergonomics*, 27, 9-17. (SCI)
24. Cai, D. , Chi, C. F., and You, M. (2008) The assessment of english letter legibility with image descriptors. *Perceptual & Motor Skills*, 107, 618-628 (SCI)
25. Chi, C. F., and Chung, K. L.,(1996) "Task analysis for computer- aided design at a keystroke level". *Applied Ergonomics,* 27, 255-265. (SCI)

Learning curve and mental workload

26. Chia-Fen Chi, Chih-Chan Cheng, Yuh-Chuan Shih, I-Sheng Sun & Tin-Chang Chang (2019) Learning rate and subjective mental workload in five truck driving tasks, Ergonomics, 62(3), 391-405, DOI: 10.1080/00140139.2018.1545054

Defect analysis

27. Chi, C. F., Lin, C.-H., Yang, H. S. (2008) The causal analysis of requested alterations for pressure garments*, Journal of Burn Care and Research*. 29, 965-974 (SCI)

Job Analysis and Job Accommodation

28. Chi, C. F., Dewi, R. S., Jang, Y., Liu, H.-L. (2018) Workplace Accommodation for Workers with Intellectual or Psychiatric Disabilities, International Journal of Industrial Ergonomics, 68, 1-7.(SCI)
29. Chi, C. F., and Lin, Y. H. (2008) An Ergonomic Evaluation of a Call Center Performed by Disabled Agents**,** *Perceptual & Motor Skills, 107, 55-64* (SSCI)
30. Chi, C. F., , Chang, T.-C., Song, J.-C. (2007) Job compensable factors and factor weights derived using job analysis data*, Perceptual & Motor Skills***,** 104, 1193-1204.(SSCI)
31. Jang, Y., Chi, C. F., Jau-Yih Tsauo, Jung-Der Wang (2006) Prevalence and Risk Factors of Work-Related Musculoskeletal Disorders in Massage Practitoners., *Journal of Occupational Rehabilitation*. 16, 425-438. (SSCI)
32. Chi, C. F., Pan, J. S., Liu, T. H., Jang, Y. (2004) The Development Of A Hierarchical Coding Scheme And Database Of Job Accommodation For Disabled Workers, *International Journal of Industrial Ergonomics,* 33, 429-447.(SCI)
33. Chi, C. F., (1999) A study on job placement for handicapped workers using job analysis data. *International Journal of Industrial Ergonomics*, 24, 337-351 (SCI)

34. Chi, C. F., & Lin, Y. T. (1998) Ratings of 830 jobs on 45 characteristics: factor & cluster analysis into Age-enhanced, Age-neutral & Age-counteracted & Age-impaired categories, *Perceptual & Motor Skills,* 87,803-816. (SSCI)

Visual fatigue & Visual load

35. Chi, C. F., and Lin, Y. H. (2009) Effects of using a screen filter on call center worker's visual fatigue measurement, *Perceptual & Motor Skills,* 108, 229-238.(SSCI)
36. . Chi, C. F., and Lin, Y. H.& Lan, W.-S. (2003) Measurement of information processing load and visual load on a dynamic information processing task, *Behavior & Information Technology*, 22, 365-374. (SCI)
35. Chi, C. F., & Lin, F.-T. (1998) A comparison of seven visual fatigue assessment techniques using three data-acquisition VDT tasks, *Human Factors,* 40, 577-590. (SCI)
36. Chi, C. F., and Lin, F.-T. (1997) "A new method for describing search patterns and quantifying visual load using eye movement data", *International Journal of Industrial Ergonomics,* 19, 249-257. (SCI)

Visual inspection

37. Chi, C. F. and Drury, C. G (2001) Limits to human optimization in inspection performance. *International Journal of Systems Science,* 32, 689-701. (SCI)
38. Drury, C. G. and Chi, C.-F. (1995) A test of economic models of stopping policy in visual search. *IIE Transactions,* 27, 382-393. (SCI)
39. Chi, C. F. and Drury, C. G (1998) Do people choose an optimal response criterion in an inspection task ? *IIE Transactions*, 30.3, 257-266. (SCI)
40. Chi, C. F. (1994) Does windowing or magnification enhance inspection ? J*ournal of the Chinese Institute of Industrial Engineers,* 11, 223-229 (EI)

Hand Performance

41. Cheng, C.-C., Shih, Y.-C.,Tsai, Yue-Jin, Chi, C.-F. (2014) ;The Influence of Cooling Forearm/Hand and Gender on Estimation of Hand Grip Strength, *Ergonomics.* 2014 Jul 17:1-13 (SCI)
42. Chi, C. F., Shih, Y.-C., Chen, W.-L. (2012) Effect of Cold Immersion on Grip Force, EMG, and Thermal Discomfort, *International Journal of Industrial Ergonomics,* 42, 113-121. (SCI)
43. Chi, C. F. and Drury, D. G.(1988), Cross Validation of Measures of Handle/Human Fit. *Applied Ergonomics*, 19.4, 309-314. (SCI)
44. Chi, C. F. and Drury, C. G. (1988), A Further Note on Psychophysical Testing of Handles. *Applied Ergonomics*, 19.4, 315-318. (SCI)
45. Chen, W.-L. Shih, Y.-C. and Chi, C. F. (2010) Hand/Finger Dexterity as a Function of Skin Temperature, EMG, and Ambient Condition, *Human Factors,* 52(3), 2010. 426-440. (SCI)

Other Publications

46. Chi, C. F. and Lin, C.-L. (1997) "Speed and accuracy in eye-gaze pointing", *Perceptual &*

Motor Skills, 85, 705-718. (SSCI)

47. Chi, C. F. & Chen, C.-L. (1997) Differential threshold of length and response criterion for inspecting irregular objects. *Perceptual & Motor Skills*, 85, 723-735. (SSCI)
48. Chi, C. F. & Lin, C.-L. (1997) Aiming accuracy of the line of sight and redesign of the eye-gaze pointing device, *Perceptual & Motor Skills,* 1111-1120, (SSCI)

Journal Publications In Chinese

49. Chi, C. F. & Chen, C.-L. (1999) Job redesign and workplace improvement for aging workers，*Journal Of Ergonomic Study*，1，95-102.
50. Chi, C. F. & Lin, M.-L. (1995) A study on correlation between embedded figure test, eye movement parameters, visual lobe and peripheral visual acuity. *Journal of the Chinese Institute of Industrial Engineer,*12, 127-133. (EI)
51. Chi, C. F. (1994) "Does windowing or magnification enhance inspection ?" *Journal of the Chinese Institute of Industrial Engineers,* 11, 223-229 .
52. Chi, C. F., Chen, C.-L., Ho, J.-J. & Du, D. (1994) Occupational Safety and Health For Aging Workers, *Journal of Occupational Safety & Health,* 3, 83-95.
53. Lin, R. Chi, C. F.,, & Chang, S. P. (1993) "The Creation of An Anthropometric Data Base Using AutoCAD"，*Journal of the Chinese Institute of Industrial Engineers,* 10, 195-202. (EI)
54. Chi, C. F., Lin, F.-T. & Lee, Y.-H. (1993) "The location of high-mounted brake light on sedan driver's visual tracking behavior", *Journal of the Chinese Institute of Industrial Engineers,* 10, 251-256**.**(EI)
55. Chi, C. F., Jang, Y., Liu , X.-L., Chen, J.-T., Yeh, W.-Y. (2002) Occupational safety, health evaluation and job accommodation for handicapped workers, *Journal of Occupational Safety & Health,* 185-197.
56. Chi, C. F., Yang, H.-S., Chen, W.-S., Liu, K.C., Chang, T.-C., Ting, H. I. In-Depth Analysis and Prevention of Fatal Falls in Construction Industry, *Journal of Occupational Safety & Health,* Vol 16, 383-400。

Invited Lectures

- Keynote speaker for Hong Kong Ergonomics Society “Icons for Automobiles” Hong Kong, 27 May 2016
- Guest speaker for Hong Kong Ergonomics Society “Fatal occupational injuries in construction industry” Hong Kong, 27 Mar 2015
- Guest speaker for 2011 12th International Conference on Quality in Research (QiR) “The Use of Archival Data: Finding Accident Patterns of Work-Related Fatalities” Indonesia, 4-7 July 2011
- Plenary speaker for 2010 International Industrial Engineering Conference: Research, Applications & Practice, to deliver “Accident Analysis and Human Error” in AUGUST, 2010
- Guest speaker for the 10th annual meeting of Society of Occupational Safety Health and Ergonomics to deliver “Accident analysis of work-related injuries in Taiwan” in Japan in Oct, 2005
- Guest speaker for Hong Kong Ergonomics Society to deliver “Ergonomic Studies on Disabled Workers” at The Hong Kong Polytechnic University in May, 2004

Projects (PI)

- Human Factors Design Guideline and Evaluation for Vehicles supported by Hua-chuang Automobile Information Technical Center Co., Ltd
- Situational Analysis and Preventive Measures of Fatal Falls supported by Institute of Occupational Safety & Health
- Change in perception of occupational risk and working behavior following an occupational injury supported by Dept of Labor, Taipei City Government
- Human Factors Training Guide for Aviation Safety supported by Civil Aeronautics Administration
- The development of a checklist for the prevention of fatal falls in construction industry supported by Institute of Occupational Safety & Health (Taiwan)
- In-depth analysis of caught in between work-related fatalities supported by Bureau of Labor Insurance
- An Epidemiological Study of Occupational Injury in Taiwan supported by Bureau of Labor Insurance
- An ergonomics study of the workplace for disabled Workers supported by Institute of Occupational Safety & Health
- Occupational disease and injury of Aging Workers supported by Institute of Occupational Safety & Health
- Ergonomic Design Guidelines for High Speed Rail System in Taiwan supported by Preparation Office of High Speed Rail System, Bureau of Transportation & Communication
- Assistive Devices for Disabled Workers supported by Bureau of Labor Insurance
- The Creation of a Database System of Computer-Related Assistive Devices for Disabled Workers supported by Institute of Occupational Safety & Health of Taiwan.
- The Development of a Coding Scheme and Database of Job Accommodation For Disabled Workers supported by Employment and Vocational Training Administration of Taiwan
- The Guide To Job Accommodation For Disabled Workers supported by Employment and Vocational Training Administration of Taiwan
- Job Placement For Handicapped Workers Using Job Analysis Data supported by Employment and Vocational Training Administration of Taiwan