Curriculum Vitae

Chung-Chih Li, Ph.D.
Professor
School of Information Technology
Illinois State University

Old Union, Room 211
Campus Box 5150
Normal, IL 61790-5150

Email: cli2@ilstu.edu
(Office) 309-438-7952 (Cell) 309-750-6405
http://www.itk.ilstu.edu/faculty/chungli

Education

Ph.D. Computer & Information Science, Syracuse University, New York 2001

Working Experiences and Positions

Illinois State University, Professor	2013 ∼ 2026
Illinois State University, Associate Professor	2009 ∼ 2013
Illinois State University, Assistant Professor	2006 ∼ 2009
Lamar University, Assistant Professor	2002 ∼ 2006
Colgate University, Visiting Assistant Professor	2001 ∼ 2002
Syracuse University, TA/RA,	1995 ∼ 2001
ETS, Research Fellow, Mathematics Automatic Scoring Initiative Project	1995

Teaching Accomplishments

- At Illinois State University 2006 ∼ 2026

IT-168 Structured Problem-Solving Using The Computer
IT-179 Introduction to Data Structures
IT-275 Java as A Second Language
IT 279 Algorithms And Data Structures
IT-327 Concepts of Programming Languages
IT-328 Introduction to The Theory of Computation
IT-368/374/385 Cryptography
IT-368/485 Web Developments Asp.Net
IT-385.09 Advanced Problem Solving and Team Work
IT-427 Design and Analysis of Algorithms
IT-428 Fundamental Theory of Computer Science
Sample materials in : IT-179, IT-279, IT-327, IT-328, IT-427, IT-428

- At Lamar University, Texas 2002 ∼ 2006

COSC-1371 Introduction to Microcomputers/MS Office
COSC-1173 Java Lab

COSC-1336 CS1/Java
COSC-1337 CS2/Java/Unix
COSC-1373 CS1/C++
COSC-1374 CS2/C++/Unix
COSC-2336 Data Structures
COSC-3302 Introduction to Computational Theory
COSC-4307 Compiler Construction
COSC-5314 Logic and Discrete Structures
COSC-5340 Cryptography
COSC-5340 Computational Learning Theory
COSC-5340 Computational Complexity Theory
COSC-5315 Foundation of Computer Science
COSC-5320 Formal Languages
COSC-5369 Graduate Projects (numerous projects advised)
COSC-5390 Thesis (numerous MS thesis advised)

- At Colgate University, New York 2001 $\sim$ 2002

COSC-100 Introduction to Internet and Data Analysis
COSC-101 Introduction to Computing (C++)

- At Syracuse University, New York 1995 $\sim$ 2001, as a TA and lecturer

CIS-275 Discrete Mathematics and Data Structures
CIS-375 Intermediate CS Mathematics
CIS-500 Mathematics Logic
CIS-520 Introduction to Abstract Mathematics
CIS-623 Structured Programming and Formal Methods
CIS-623 Semantics, Programming, and Verification

Committee & Service

School Faculty Status Committee (elected 5 terms, 2 years a term)
Curriculum Committee
Academic Freedom, Ethics, And Grievance Committee
College Faculty Status Committee
College Curriculum Committee
College Diversity, Equity, Belonging and Inclusion Committee
IT Strategic Plan initiative
Graduate Admissions Committee
ABET Assessment Committee
Scholarship Committee
Recruitment and Retention Committee
Honor Program Liaison

ACM Programming Competition Team (Advisor/Coach)
Dean Search Committee
Director Search Committee
Faculty Search Committee

North American Taiwanese Professor Association 2002-2026
– Board Director, 2005-2007, 2015-2017, President 2017-2018

Selected Publications

Books:

1. Chung-Chih Li. The America You Haven't Read About: Chung-Chih Li's Cornfields (你沒讀到的美國，李中志的玉米田) Yushan Publisher, pp 316, Taipei, Taiwan, 2023. ISBN 978-986-294-351-9
2. Chung-Chih Li and Kishan Mehrotra. Problems on Discrete Mathematics. *Syracuse University*, pp 411 (Textbook), 2007, (Volume I & Volume II).

Nontechnical Articles:

3. More than 300 articles, op-eds, columns, essays published in Taiwan's newpaper, magazines, and forums since 2006-2026.
4. Chung-Chih Li. Alan Turing's Idea of Artificial Intelligence . *Science Monthly*, No. 557, pages 380-385, Taipei, Taiwan, May 2016.
5. Chung-Chih Li. Why Alan Turing is the father of computers. *Science Monthly*, No. 555, pages 224-227, Taipei, Taiwan, March 2016.
6. Chung-Chih Li. The Break of Enigma. *Science Monthly*, No. 553, pages 64-67, Taipei, Taiwan, January 2016.
7. Chung-Chih Li. Godel, in Search of The Holy Grail. *Science Monthly*, Vol:44/10, No 526, pages 780-783, Taipei, Taiwan, October 2013.

Peer-Reviewed Conference and Journal publications:

8. Y. Tang, F. Wang, Zutong Hu, and C.C. Li. Fusion-Based Traffic Prediction for 5G Slicing: a Hybrid Lstm-Transformer Model In *Proceedings of The 28th International Conference on Information Fusion (FUSION)*, Rio de Janeiro, Brazil, 2025, pp. 1-8, doi: 10.23919/FUSION65864.2025.11124140.
9. Y. Tang, F. Wang, Zutong Hu, and C.C. Li. BeamCovert: Spatial Covert Communication for Secure and Efficient IIoT in 5G Smart Factories In *Proceedings of 2025 International Conference on Smart Applications, Communications and Networking (SmartNets)* , Istanbul, Turkiye, 2025, pp. 1-6, doi: 10.1109/SmartNets65254.2025.11106792
10. M. Adhikari, F. Wang, C.C. Li, G. Cheng and Y. Tang. SDT: Towards a Blockchain-Based Secure Data Trading Application. In *2024 IEEE Interna-*

tional Conference on Decentralized Applications and Infrastructures (DAPPS), Pages 45-50, Shanghai, China, 2024.

11. Jenn-Long Liu and Chung-Chih Li. An Improved Artificial Bee Colony Algorithm Applied to Engineering Optimization Problems. *Journal of Information Science and Engineering*, 32(4):863–886, Teipei Taiwan, July 2016.
12. Jenn-Long Liu, Chung-Chih Li, and Chien-Liang Chen. Local Search-based Enhanced Multi-objective Genetic Algorithm and its Application to the Gestational Diabetes Diagnosis. *Journal of Advances in Information Technology*, 6(4):252-256, California US, November 2015.
13. Jenn-Long Liu and Chung-Chih Li. Improved Fuzzy C-means Clustering Algorithms Based on Artificial Bee Colony for Liver Disease Diagnosis. *Special edition for International Conference on Advanced Information Technologies*, 153-160, Taipei, Taiwan, April 2015.
14. Jenn-Long Liu, Chung-Chih Li, and Chien-Liang Chen. Local Search-based Enhanced Multi-objective Genetic Algorithm and its Application to the Gestational Diabetes Diagnosis. In *The 2015 International Conference on Information Technology)*, Singapore, February 2015.
15. Jenn-Long Liu, Chung-Chih Li, and Chien-Liang Chen. Genetic Algorithm-based K-means Clustering Technique And Its Application To Cardiac Disease Diagnosis. In *The 2014 Conference on Technologies and Applications of Artificial Intelligence*, Taipei, Taiwan, November 2014.
16. Yang Xiao, Chung-Chih Li, Ming Lei, and Susan V. Vrbsky. Differentiated virtual passwords, secret little functions, and codebooks for protecting users from password theft. *IEEE Systems Journal*, 8(2):406-416, June 2014.
17. Xiang Fu, Michael C. Powell, Michael Bantegui, and Chung-Chih Li. Simple linear string constraints. *Journal of Formal Aspects of Computing*, 25(6):847–891, Novermber 2013.
18. Chung-Chih Li. Is the trilogy of gap, compression, and honesty theorems still significant at type-2? In *Turing centenary Conference, Computability in Europe 2012: How the World Computes*, Cambridge, UK, June 2012.
19. Chung-Chih Li, Kishan Mehrotra, and Chu Jong. Discrete mathematics as a transitional course. In *The International Conference on Frontiers in Education: Computer Science and Computer Engineering*, Las Vegas, USA, July 2012.
20. Chung-Chih Li. Honesty and time-constructibility in type-2 computation. In *Proceedings of Computability in Europe, CiE 2011: Models of Computation in Context*, Sofia, Bulgaria, June 2011.
21. Xiang Fu and Chung-Chih Li. A string constraint solver for detecting web application vulnerability. In *Proceedings of The 22nd International Conference on Software Engineering and Knowledge Engineering*, Redwood City, USA, July 2010.
22. Xiang Fu and Chung-Chih Li. Modeling regular replacement for string constraint solving. In *Proceedings of the Second NASA Formal Methods Symposium*, pages

67–76, Redwood City, USA, April 2010.

23. Chung-Chih Li. Speed-up theorems in type-2 computation using oracle Turing machines. *Journal of Theory of Computing Systems*, 45(4):880–896, July 2009.
24. Chung-Chih Li. Union theorems in type-2 computations. In *Proceedings of Computability in Europe, CiE 2009: Mathematical Theory and Computational Practice*, Heidelberg, Germany, July 2009.
25. Chung-Chih Li. NP-completeness of RRS functions. In *Proceedings of Computability in Europe, CiE 2009: Mathematical Theory and Computational Practice*, Heidelberg, Germany, July 2009.
26. Bo Sun, Yang Xiao, Chung-Chih Li, Hisao-Hwa Chen, and T. Andrew Yang. Security co-existence of wireless sensor networks and RFID for pervasive computing. *Elsevier Computer Communications Journal*, 31:4294–4303, 2008.
27. Ming Lei, Yang Xiao, Susan V. Vrbsky, and Chung-Chih Li. Virtual password using random linear functions for on-line services, ATM machines, and pervasive computing. *Elsevier Computer Communications Journal*, 31:4367–4375, 2008.
28. Chung-Chih Li. Query-optimal oracle Turing machines for type-2 computations. In *Proceedings of Computability in Europe, CiE 2008: Logic and Theory of Algorithms*, pages 293–303, Athens, Greece, June 2008.
29. Chu J. Jong and Chung-Chih Li. Multi-lateral constructive learning process with hands-on problem-based solving technology. In *Proceedings of The 2008 International Conference on Frontiers in Education: Computer Science and Computer Engineering*, Las Vegas, Nevada, USA, July 2008.
30. Yang Xiao, Chung-Chih Li, Ming Lei, and Susan V. Vrbsky. Secret little functions and codebook for protecting users from password theft. In *Proceedings of IEEE ICC*, pages 1525–1529, 2008.
31. Ming Lei, Yang Xiao, Susan V. Vrbsky, Chung-Chih Li, and Li Liu. A virtual password scheme to protect passwords on the internet. In *Proceedings of IEEE ICC*, pages 1536–1540, 2008.
32. Dehu Qi and Chung-Chih Li. Self-organizing map based web pages clustering using web logs. In *Proceedings of 16th International Conference on Software Engineering and Data Engineering, SEDE-2007*, pages 265–270, Las Vegas, Nevada, July 2007.
33. Chung-Chih Li. Speed-up theorems in type-2 computation. In S. Barry Cooper, Benedikt Löwe, and Andrea Sorbi, editors, *Proceedings of Computability in Europe, CiE 2007: Computation and Logic in the Real World*, pages 478–487, Siena, Italy, June 2007. Springer, LNCS 4497.
34. Bo Sun, Chung-Chih Li, and Yang Xiao. A lightweight secure solution for RFID. In *Proceedings of IEEE GLOBECOM 2006*, San Francisco, CA, November 2006.
35. Bo Sun, Chung-Chih Li, Kui Wu, and Yang Xiao. A lightweight secure protocol for wireless sensor networks. *Elsevier Computer Communications Journal*, 29(13-14):2556–2568, August 2006. Special Issue on Wireless Sensor Networks, Performance, Reliability, Security and Beyond.

36. Chung-Chih Li. Clocking type-2 computation in the unit cost model. In Arnold Beckmann, Ulrich Berger, Benedikt Löwe, and John V. Tucker, editors, *Proceedings of Computability in Europe, CiE 2006: Logical Approaches to Computational Barriers, CSR 7-2006*, pages 182–192, Swansea, UK, 2006.
37. Bo Sun, Chung-Chih Li, Kui Wu, and Yang Xiao. A LCG-based secure protocol for wireless sensor. In *Proceedings of IEEE International Conference on Communications (ICC 2006): Wireless Ad Hoc and Sensor Networks Symposia*, pages 3627–3632, Istanbul, Turkey, 2006.
38. Chung-Chih Li. An immediate approach to balancing nodes of binary search trees. *Journal of Computing Sciences in Colleges*, 21(3):238–245, April 2006.
39. Chung-Chih Li, Hema Sagar R. Kandati, and Bo Sun. Security evaluation of email encryption using random noise generated by LCGs. *Journal of Computing Sciences in Colleges*, 20(4):294–301, 2005.
40. Chung-Chih Li and Hikyoo Koh. Canonical sequence directed tactics analyzer for computer go games. In M. Mohammadian, editor, *Proceedings of the International Conference on Computational Intelligence for Modelling Control and Automation, CIMCA 2005*, volume 1, pages 1066–1071, Vienna, Austria, November 2005.
41. Chung-Chih Li and Hikyoo Koh. Using joseki for tactics deployment in computer go. *Journal of International Computer Games Association, ICGA*, 28(3):254–258, September 2005.
42. Chung-Chih Li and Bo Sun. Using linear congruential generators for cryptographic purposes. In *Proceedings of the ISCA 20th International Conference on Computers and Their Applications*, pages 13–18, March 2005.
43. Chung-Chih Li. Asymptotic behaviors of type-2 algorithms and induced Baire topologies. In *Proceedings of the Third International Conference on Theoretical Computer Science*, pages 471–484, Toulouse, France, August 2004.
44. Hema Sagar R. Kandati and Chung-Chih Li. Encrypting emails with lcm random noises. In *Fifth Annual Lamar Student Research Conference*, Beaumont, Texas, 2004.
45. Chung-Chih Li and James S. Royer. On type-2 complexity classes: Abstract. *IEEE Conference on Computational Complexity*, May 2003.
46. Chung-Chih Li and James S. Royer. On type-2 complexity classes: Preliminary report. In *Proceedings of the Third International Workshop on Implicit Computational Complexity*, pages 123–138, Aarhus, Denmark, May 2001.
47. Chung-Chih Li. *Type-2 Complexity Theory*. Ph.D. dissertation, Syracuse University, Syracuse, New York, USA, 2001.
48. Chung-Chih Li. *Analysis of Go Game Tactics Based on Predefined Canonical Sequences*. Master thesis, Lamar University, Beaumont, Texas, USA, 1991.

Honors and Awards

Excellent Journalism Awards Nominee (final 4), Taiwan 2019

North America Taiwanese Professors' Association, Service Award	2019
North America Taiwanese Professors' Association, Service Award	2015
National Science Foundation (NSF CCLI Grant)	2009
Texas Advanced Research Program (ARP) Award	2006
Research Enhancement Grant, Lamar University	2004
Research Enhancement Grant, Lamar University	2003
LePage Award, the Wilbur R. LePage Endowment	2001
Outstanding TA Award, Syracuse University	1998
National Science Foundation Award	1998
Outstanding TA Award , Dept. of EECS, Syracuse University	1996
Research Fellowship, ETS, New Jersey	1995

Grants and Proposals

- Funded:

1. Chung-Chih Li, Billy Lim. A Trial-and-Failure Project Tutoring System for Internet Technology Education NSF CCLI (Collaborative Research), $55,009.
2. Andrew T Yang, Chung-Chih Li. SOCO - Secure and Optimized Communication Organization for Target Tracking in Wireless Sensor Networks. 2006 Texas Advance Research Program, $99,972.
3. Chung-Chih Li. Encrypting Emails with LCM Random Noises. 2004 Lamar University Research Enhancement Grant, $5,000.
4. Chung-Chih Li. A New Approach to Measuring The Computational Complexity of Type-2 Algorithms. 2003 Lamar University Research Enhancement Grant, $5,000.

- Not Funded:

5. Chung-Chih Li, Chu Jong Type II: Collaborative Research: Preparing K-12 Teachers for Computing in the 21st Century 2011 NSF CE-21, $120,097.
6. Chung-Chih Li. Encryption with RRS Functions. 2009 CAST University Research Grant, $5,000.
7. Chung-Chih Li. Query Optimal Programs in Type-2 Computation 2008 CAST University Research Grant, $5,000.
8. Chung-Chih Li, Hikyoo Koh, Hsing-Wei Chu. Heuristic Development of GO Programs Using Canonical Deployment Sequences 2006 Texas Advance Research Program, $100,000.
9. Chung-Chih Li. Second Order Complexity Classes and Their Applications 2003 Texas Advance Research Program, $50,000. (Pre-approved)
10. Chung-Chih Li A New Approach to Define Asymptotic Behaviors of Type-2 Algorithms and Its Applications Measuring The Computational Complexity of Type-2 Algorithms. 2002 Lamar University Research Enhancement Grant, $5,000.