

Mark I. Hwang

Professor of Information Systems Central Michigan University

Google Scholar <http://mark-hwang.strikingly.com> mark.hwang@cmich.edu 989-491-2660

PROFESSIONAL PROFILE

- Interested in teaching, training, and consulting in ERP, data warehousing, data analytics, and business intelligence.
- SAP TS410 certified and Level 2 trainer of the ERPSim games.
- Taught SAP ERP and BI for over 15 years. Developed courses on SAP Business Intelligence and SAP HANA. Proficient in SAP S/4HANA, SAP BW, SAP BOJ Dashboard, SAP Predictive Analytics, SAP Lumira, SAP Web IDE, SAP HANA Studio, and SAP Cloud Platform.
- Taught online MBA and MSIS programs for over 15 years. Taught Information Systems, Application Development, Database, and SAP Business Analytics.
- Published in prominent business and information systems journals including *Communications of the AIS*, *European Journal of Information Systems*, and *Information & Management*.

ACADEMIC EXPERIENCE

2004-present	Professor	Central Michigan University
2010	Visiting Professor	Tatung University, Taiwan
2000-2004	Associate Professor	Central Michigan University
2002	Director, MSIS program	Central Michigan University
1997-2000	Assistant Professor	Central Michigan University
1991-1997	Assistant Professor	University of Texas-Pan American
1990-1991	Visiting Assistant Professor	University of North Texas
1986-1990	Teaching Fellow/Lecturer	University of North Texas

EDUCATION

Ph.D.	University of North Texas, (Business Computer Information Systems)
M.B.A.	Lamar University
B.C.	National Chengchi University, Taipei, Taiwan, (International Business)

WORKSHOPS COMPLETED

- Career Essentials in Generative AI by Microsoft and LinkedIn, 2023
- edX Verified Certificate for Blockchain: Understanding Its Uses and Implications, 2021
- SAS Enterprise Miner
- IBM Intelligence Miner
- SAP Training Classes
 - ◇ SAP TS410 Business Process Integration with SAP S/4HANA 1709, certified May 2019
 - ◇ SAP TERP10 ERP Integration of Business Process with mySAP ERP 2005, certified May 2009
 - ◇ SAP BW 310

- ◇ BusinessObjects Dashboard Manager
- ◇ BusinessObjects Xcelsius
- ◇ SAP TZHANA (SAP In-Memory Appliance)
- ◇ SAP University Alliances Faculty Workshops
- ◇ Analytics Bootcamp, 2021
- ◇ Implementation and Configuration
- ◇ ABAP Programming
- ◇ Business Intelligence
- ◇ Mobile Application Development
- ◇ SAP HANA Native Application Development
- ◇ ERPSim Level 2 Training
- openSAP Courses
 - ◇ Sustainability: Learning from Leading Companies, 2019
 - ◇ Intelligent Decisions with SAP Analytics Cloud, 2019
 - ◇ Analyzing Connected Data with SAP HANA Graph, 2018
 - ◇ Analytics with SAP Cloud Platform, 2018
 - ◇ SAP Transformation Navigator in a Nutshell, 2017
 - ◇ Data Science in Action - Building a Predictive Churn Model, 2017
 - ◇ Introduction to SAP HANA Administration, 2017
 - ◇ Full-Text Search with SAP HANA Platform, 2017
 - ◇ Big Data with SAP Vora – Engines and Tools, 2017
 - ◇ SAP Cloud Platform Essentials (Update Q3/2017), 2017
 - ◇ Spatial Analysis with SAP HANA Platform, 2017
 - ◇ Enterprise Machine Learning in a Nutshell, 2016
 - ◇ Big Data with SAP HANA Vora, 2016
 - ◇ Text Analytics with SAP HANA Platform, 2016
 - ◇ SAP Business Warehouse powered by SAP HANA, 2016
 - ◇ SAP HANA Cloud Platform Essentials, 2016
 - ◇ Developing Web Apps with SAPUI5, 2016
 - ◇ Developing Mobile Apps with SAP HANA Cloud Platform, 2015
 - ◇ Introduction to SAP HANA, 2014
 - ◇ SAP Business Suite Powered by SAP HANA, 2014

JOURNAL
ARTICLES

1. Jou, J. and Hwang, M.I. (2022). A memory-interference versus the “dud” effect account of a DRM false memory result: Fewer related targets at test, higher critical-lure false recognition. *Psychonomic Bulletin & Review*, 29:1397–1404.
2. Hwang, M.I. and Helser, S. (2022). Cybersecurity educational games: A theoretical framework. *Information and Computer Security*, 30, 2, 225-242.
3. Helser, S. and Hwang, M.I. (2021). Identity theft: A review of critical issues. *International Journal of Cyber Research and Education*, 3(1), 65-77.
4. Hwang, M.I. (2019). ERP Simulation Games in Asynchronous Online Classes. *e-Journal of Business Education & Scholarship of Teaching*, 13(3), 37-45.
5. Hwang, M.I. (2019). Top management support and information systems implementation success: a meta-analytical replication. *International Journal of Information Technology and Management*, 18(4), 347-361.
6. Hwang, M.I. (2018). Graph processing using SAP HANA: A teaching case. *e-Journal of Business Education & Scholarship of Teaching*, 12(2), 155-165.

7. Hwang, M.I. (2018). Relationship between teamwork and team performance: Experiences from an ERPsim competition. *Journal of Information Systems Education*, 29(3), 157-168.
8. Hwang, M.I. and Cruthirds, K. (2017). Impact of an ERP simulation game on online learning. *International Journal of Management Education*, 15(1), 60-66.
9. Hwang, M.I. (2016). Top management support, task interdependence and information systems implementation success: The role of common method variance and measurement error. *Communications of the ICISA*, 17(1), 30-47.
10. Hwang, M.I. (2014). Disentangling the effect of top management support and training on systems implementation success: A meta-analysis. *Communications of the Association for Information Systems*, 35(1), 19-37.
11. Yang, C., and Hwang, M.I. (2014). Personality traits and simultaneous reciprocal influences between job performance and job satisfaction. *Chinese Management Studies*, 8(1), 6-26.
12. Li, S., Chen, S., Hu, C., Wu, W., and Hwang, M.I. (2012). Business process auditing on an SOA foundation. *International Journal of Innovative Computing, Information and Control*, 8(1), 243-254.
13. Chen, S., Yen, D.C., and Hwang, M.I. (2012). Factors influencing the continuance intention to the usage of Web 2.0: An empirical study. *Computers in Human Behavior*, 28, 933-941.
14. Yang, C., Hwang, M.I. and Chen, Y. (2011). An empirical study of the existence, relatedness, and growth (ERG) theory in consumer's selection of mobile value-added services. *African Journal of Business Management*, 5(19), 7885-7698.
15. Hwang, M.I. and Schmidt, F.L. (2011). Assessing moderating effect in meta-analysis: A re-analysis of top management support studies and suggestions for researchers. *European Journal of Information Systems*, 20(6), 693-702.
16. Hwang, M.I. (2011). Significance testing and statistical power in IS research: Lessons from the top management support literature. *The Journal of American Academy of Business, Cambridge*, 16(2), 75-80.
17. Lin, J.W. and Hwang, M.I. (2010). Audit quality, corporate governance, and earnings management: A meta-analysis. *International Journal of Auditing*, 14(1), 57-77.
18. Hwang, M.I. and Xu, H. (2008). A structural model of data warehousing success. *Journal of Computer Information Systems*, 49(1), 48-56.
19. Hwang, M.I. and Lin, J.W. (2008). A meta-analysis of the association between earnings management and audit quality and audit committee effectiveness. *Corporate Ownership & Control*, 6(1), 48-56.
20. Hwang, M.I. and Xu, H. (2007). The effect of implementation factors on data warehousing success: An exploratory study. *Journal of Information, Information Technology, and Organizations*, 2, 1-16.
21. Hwang, M.I. and Xu, H. (2005). A survey of data warehousing success issues. *Business Intelligence Journal*, 10(4), 7-13.
22. Hwang, M.I. (2004). Data warehouse implementation: A critical review and a success model. *Journal of Management Systems*, 16(2), 41-49.
23. Lin, J.W., Hwang, M.I., and Li, J.F. (2004). A neural fuzzy system approach to assessing the risk of earnings restatements. *Issues in Information Systems*, 5(1), 201-207.
24. Lin, J.W., Hwang, M.I., and Becker, J.D. (2003). A fuzzy neural network for assessing the risk of fraudulent financial reporting. *Managerial Auditing Journal*, 18(8), 657-665.
25. Hwang, M.I., and Cappel, J.J. (2002). Data warehouse development and management: Practices of some large companies. *Journal of Computer Information Systems*, 43(1), 3-6.

26. Hwang, M.I., Becker, J.D., and Lin, J.W. (2001). Representing multivalued attributes in database design. *Issues in Information Systems*, 2(1), 160-166.
27. Lin, J.W. and Hwang, M.I. (2000). Assessing the risk of management fraud: A neural fuzzy system approach. *Issues in Information Systems*, 1(1), 270-276.
28. Liu, W., Hwang, M.I., and Chen, D. (2000). Sovereign debt service capacity estimation by logistic regression and neural networks. *Multinational Business Review*, 8(2), 51-57.
29. Hwang, M.I. and Lin, J.W. (2000). Neural fuzzy systems: A tutorial and an application. *Journal of Computer Information Systems*, 40(4), 27-31.
30. Lin, J.W., and Hwang, M.I. (2000). A meta-analysis of the effect of task properties on business failure prediction accuracy. *Advances in Accounting*, 17, 135-149.
31. Hwang, M.I., Windsor, J.C., and Pryor, A. (2000). Building a knowledge base for MIS research: A meta-analysis of a systems success model. *Information Resources Management Journal*, 13(2), 26-32.
32. Hwang, M.I., and Lin, J.W. (1999). Information dimension, information overload and decision quality. *Journal of Information Science*, 25(3), 213-218.
33. Hwang, M.I., and Thorn, R. (1999). The effect of user engagement on system success: A meta-analytical integration of research findings. *Information & Management*, 35(4), 229-236.
34. Liu, W., and Hwang, M.I. (1999). A neural fuzzy system for sovereign debt service capacity evaluation. *International Journal of Business*, 4(1), 53-70.
35. Hwang, M.I. (1998). Did task type matter in the use of decision room GSS? A critical review and a meta-analysis. *Omega: The International Journal of Management Science*, 26(1), 1-15.
36. Hwang, M.I. (1996). The use of meta-analysis in MIS research: Promises and problems. *Data Base*, 27(3), 35-48.
37. Hwang, M.I. (1995). The effectiveness of graphic and tabular presentation under time pressure and task complexity. *Information Resources Management Journal*, 8(3), 25-31.
38. Hwang, M.I. (1994). Decision making under time pressure: A model for information systems research. *Information & Management*, 27, 197-203.
39. Hwang, M.I., and Tsai, R. (1992). Selecting an IT strategic planning methodology: A contingency approach. *Journal of Information Technology Management*, 3(1), 39-42.
40. Hwang, M.I. (1992). Flowcharts as programming aids: A human information processing perspective. *Journal of Computer Information Systems*, 32(3), 29-34.
41. Hwang, M.I., and Wu, B.J. (1990). The effectiveness of computer graphics for decision support: A meta-analytic integration of research findings. *Data Base*, 21(2 & 3), 11-20.

BOOK
CHAPTERS

1. Hwang, M.I. (2008). Integrating enterprise systems. In Mehdi Khosrowpour (Eds), *Encyclopedia of Information Science and Technology*, 2nd edition, Hershey: Idea Group, 2086-2090.
2. Hwang, M.I. (2005). Enterprise resource planning and systems integration. In Mehdi Khosrowpour (Eds), *Encyclopedia of Information Science and Technology*, Hershey: Idea Group, 1083-1088.
3. Hwang, M.I. (2003). A knowledge base for information systems success research. In Mehdi Khosrowpour (Eds), *Advanced Topics in Information Resources Management*, 3, Hershey: Idea Group, 183-196.

CONFERENCE
PRESENTATIONS/
PROCEEDINGS

1. Xu, H., and Hwang, M.I. (2023). Data quality and cybersecurity on the use and benefits of cloud ERP. AMCIS 2023 TREOs. 45. https://aisel.aisnet.org/treos_amcis2023/45.
2. Ouyang, H., Cham, X.S., Chen, X., Hwang, M.I. (2022). Big data analytics in supply chain management: A review and recommendations. 2022 Proceedings of the Conference on Information Systems Applied Research, v15 n5735.
3. Hwang, M.I. (2021). Issues in information systems education: A text mining approach. AMCIS 2021 TREOs. 9. https://aisel.aisnet.org/treos_amcis2021/9.
4. Dang, T., Fatunke, M., Kandimalla, S., and Hwang, M.I. (2019). Securing enterprise databases: SQL injection & cross-site scripting attacks. Paper presented at the 2019 SAM International Management Conference.
5. Hwang, M.I. (2018). Graph processing using SAP HANA. Proceedings of the 2018 Clute International Conferences, 155-1 to 155-8.
6. Hwang, M.I. (2017). An assignment for the nexus of forces. AMCIS 2017 Proceedings. 2. <https://aisel.aisnet.org/amcis2017/ISEducation/Presentations/2>.
7. Hwang, M.I. (2017). Teamwork, team performance and team satisfaction: Lessons from an ERPsim game competition. Proceedings of the 2017 Midwest Decision Science Institute Annual Conference, 42.
8. Cruthirds, K., and Hwang, M.I. (2016). Use of ERPsim game in online classes. Proceedings of the Northeast Decision Sciences Institute Annual Conference, 834-841.
9. Hwang, M.I. and Mamidi, S. (2016). A web-based health information system. Proceedings of the 19th SAP Academic Conference, 30-32.
10. Hwang, M.I. (2015). Effect of top management support on information systems implementation success: additional issues. Proceedings of the 7th Annual American Business Research Conference.
11. Hwang, M.I. (2013). Understanding the effect of top management support and training on systems implementation success. Proceedings of the 2013 International Academy of Business and Public Administration Disciplines Conference.
12. Hwang, M.I., Lin, C.T., and Lin, J.W. (2012). Organizational factors for successful implementation of information systems: Disentangling the effect of top management support and training. Proceedings of the Southern Association for Information Systems Conference, 111-115.
13. Hwang, M.I. (2011). Is there a formula for successful implementation of information systems? A reexamination of the role of top management support. Proceedings of the Global Economics, Finance and Management Conference.
14. Hwang, M.I., Yang, C., and Chen, Y. (2011). Selection of mobile value-added services: An ERG perspective. Proceedings of the 2nd International Multi-Conference on Complexity, Informatics and Cybernetics.
15. Hwang, M.I. (2009). Success factors for business intelligence: perceptions of business professionals. Proceedings of the 19th Annual Conference of the Association of Chinese Management Educators, 484-490.
16. Hwang, M.I. and Cappel, J.J. (2008). Toward a greater understanding of business intelligence. Proceedings of the 38th Annual Conference of the Southeast Decision Sciences Institute, 324-328.
17. Hwang, M.I. and Xu, H. (2007). Understanding the benefits of data warehousing. Proceedings of the 38th Annual Meeting of the Midwest Decision Science Institute, 1-15.

18. Xu, H., and Hwang, M.I. (2006). Critical success factors for data warehousing: Some empirical evidence. Proceedings of the 37th Annual Meeting of the Midwest Decision Science Institute, 1-13.
19. Hwang, M.I. (2004). Integrating enterprise systems in mergers and acquisitions. Proceedings of the 10th Americas Conference on Information Systems, 62-66.
20. Hwang, M.I. (2003). Critical success factors for data warehouse implementation: A framework for analysis and research. Proceedings of the 2003 Information Resources Management Association International Conference, 195-196.
21. Hwang, M.I., and Cappel, J.J. (2001). An assessment of company data warehousing practices. Proceedings of the 7th Americas Conference on Information Systems, 317-321.
22. Hwang, M.I., and Lin, J.W. (2000). A neural fuzzy system approach to management fraud detection. Proceedings of the 6th Americas Conference on Information Systems, 23-25.
23. Hwang, M.I., and Becker, J.D. (2000). Alternative representations of multivalued attributes in relational databases. Proceedings of the 31st Annual Conference of the Decision Sciences Institute Southwest Region, 8-10.
24. Lin, J.W., and Hwang, M.I. (2000). Pension accounting choice: A neural fuzzy approach. Proceedings of the American Society of Business and Behavioral Sciences, 7(1), 298-307.
25. Hwang, M.I., and Lin, J.W. (1998). The use of student surrogates in business decision research: A meta-analysis of the bankruptcy prediction literature. Proceedings of the 29th Annual Meeting of the Decision Sciences Institute, 59.
26. Lin, J.W., and Hwang, M.I. (1998). The effect of information diversity and dimension on decision quality in an unstructured decision task. Proceedings of the 29th Annual Meeting of the Decision Sciences Institute, 63-65.
27. Hwang, M.I., Liu, W., and Lin, J.W. (1998). Assessing sovereign debt service capacity: A neural fuzzy system approach. Proceedings of the 4th Americas Conference on Information Systems, 165-167.
28. Lin, J., and Hwang, M.I. (1998). The effect of subject type and experiment setting on corporate bankruptcy prediction: A meta-analysis. Collected Papers and Abstracts of the American Accounting Association Southwest Region Meeting, 5.
29. Thorn, R., and Hwang, M.I. (1998). Moderator variables that influence the effect of user engagement on system success. Proceedings of the 29th Annual Conference of the Southwest Region Decision Sciences Institute, 153.
30. Hwang, M.I. and Thorn, R. (1997). Understanding the effect of user engagement on system success: A meta-Analysis. Proceedings of the 28th Annual Meeting of the Decision Sciences Institute, 2, 831-833.
31. Hwang, M.I. (1997). Corporate bankruptcy prediction: A data envelopment analysis. Proceedings of the 28th Annual Conference of the Southwest Region Decision Sciences Institute, 99-101.
32. Hwang, M.I., and Windsor, J. C. (1996). Validating the DeLone and McLean information systems success model: A meta-analysis. Proceedings of the 27th Annual Meeting of the Decision Sciences Institute, 2, 918-920.
33. Lin, J., and Hwang, M.I. (1996). The use of meta-analysis in Accounting research: Promises and issues. Proceedings of the 27th Annual Meeting of the Decision Sciences Institute, 1, 79-81.
34. Hwang, M.I. (1996). Managing global computer networks: U.S. subsidiary's perspective. Proceedings of the 27th Annual Conference of the Southwest Region Decision Sciences Institute, 48-50.

35. Hwang, M.I., and McLean, E.R. (1996). The use of meta-analysis in validating the DeLone and McLean information systems success model. Proceedings of the 29th Hawaii International Conference on Systems Sciences, 4, 176-180.
36. Hwang, M.I. (1995). Determinants of effective computer support for group work: A meta-analysis. Proceedings of the 26th Annual Conference of the Southwest Region Decision Sciences Institute, 28-30.
37. Hwang, M.I. (1994). Meta-Analysis as a research tool for integrating research findings in the GDSS literature. Proceedings of the Pacific Research Institute for Information Systems Management 1994 International Conference, 195-205.
38. Lin, J., and Hwang, M.I. (1993). Resolving the controversy in the business failure literature: A meta-analysis. Proceedings of the 24th Annual Meeting of the Decision Sciences Institute, 1993, 1, 206-208.
39. Hwang, M.I. (1992). Decision making under time pressure: Systems design implications. Proceedings of the 10th Annual Association of Management Conference, 25-29.
40. Tsai, R., Richards, T., and Hwang, M.I. (1992). Implementing a local area network: Some considerations. Proceedings of the 23rd Annual Meeting of the Midwest Decision Sciences Institute, 67-69.
41. Hwang, M.I. (1991). A framework for studying the value of information in information systems design. Proceedings of the 22nd Annual Conference of the Southwest Region Decision Sciences Institute, 33-35.

GRANT ACTIVITIES

1. Disentangling the effect of top management support and training on systems implementation success: A meta-analysis. Creative and Scholarly Support Grant, Office of Research and Sponsored Programs, Central Michigan University, 2012, \$9,888.
2. Determinants of earnings management: A meta-analysis. Faculty Summer Research Grant, College of Business Administration, Central Michigan University, 2006, \$8,000.
3. BI benchmark study. Central Michigan University Research Corporation, Central Michigan University, 2005, \$18,850.
4. Critical success factors for data warehouse implementation. Faculty Research and Creative Endeavors Committee, Central Michigan University, 2004, \$5,000.
5. Critical success factors of data warehousing implementation: A meta-analysis. Research Professorship, Central Michigan University, 2002.
6. Survey of data warehousing practices. Blue Cross Blue Shield of Michigan, 2000, \$16,827.

PROFESSIONAL SERVICES

- Editorial Review Board Member:
 - ✧ Journal of Database Management (former)
 - ✧ International Journal of Information Technology and Web Engineering (former)
 - ✧ Communications of the International Chinese Information Systems Association
 - ✧ Journal of Information Analysis
 - ✧ Journal of Game Studies
- Guest Editor:

- ✧ International Journal of Information Management special issue on Meta-Analysis, 2020
- ✧ Frontiers in Psychology, research topic on Human Element in Cybersecurity, 2021
- Book Editor:
 - ✧ Teaching Information Systems, Edward Elgar Publishing, 2024
- Journal Reviewer:
 - ✧ MIS Quarterly, Data Base, Decision Support Systems, Decision Sciences, Omega, Management Science, International Journal of Human-Computer Studies, Communications of AIS, Communications of the ACM, European Journal of Information Systems, International Journal of Information Management, International Journal of Accounting Information Systems, Information & Management, Journal of Organizational Computing and Electronic Commerce, New Media & Society, International Journal of Management Education, SAGE Open, Managerial Auditing Journal, Information Systems Management, Palgrave Communications, Computer Methods and Programs in Biomedicine, Journal of Business Ethics, Technological Forecasting & Social Change, Journal of Medical Systems
- University Committee:
 - ✧ Faculty Research and Creative Endeavors Committee, 1999-2002; chair, 2001-2002
 - ✧ Undergraduate Research Committee, 2001
 - ✧ Committee on Committees, 1999-2002
 - ✧ Academic Freedom Committee, 2002-2005
 - ✧ University Grievance Committee, 2002-2005; chair, 2018-2021; 2023-present
 - ✧ MSA Council, 2005-2008
 - ✧ The Student Association of Taiwan, advisor, 1997-present
 - ✧ Public Broadcast Committee, 2012-2014
- College Committee:
 - ✧ Faculty Development Committee, 1998-1999; 2013-2020; 2021-present
 - ✧ Technology Advisory Committee, 1999-2001
 - ✧ Graduate Studies Committee, 2002
 - ✧ SAP University Alliance Strategic Committee, 2000-2010
 - ✧ Assessment Committee, 2008-2010
 - ✧ Dean Search Committee, 2009-2010
- Department Committee:
 - ✧ Personnel Committee, chair, 2000-2002; 2021-2023
 - ✧ Graduate Curriculum Committee, 2003-2010
 - ✧ MIS/MSIS/CBC Committee, 2003-2010
 - ✧ Promotion of Majors Committee, 1997-2002
 - ✧ BIS Publicity/Newsletter/Website, 2003-2010
 - ✧ The Association of Information Technology Professionals, advisor, 1997-2000
 - ✧ Information Systems Committee, 2010-present; chair, 2016-2017