

Fuhua (Oscar) Lin



School of Computing and
Information Systems,
Faculty of Science and Technology,
Athabasca University
1 University Dr., Athabasca, AB,
Canada, T9S 3A3
Tel: 1-780- 220-8069

Email: oscarl@athabascau.ca
Web: <https://oscar.athabascau.ca>
Last updated: Nov. 06, 2023

Academic Appointment

Full Professor	Athabasca University (AU)	2007.10-present
Invited Researcher	Waseda University, Japan	2014-present
Associate Professor	Athabasca University	2000.10-2007.9
Assistant Research Officer	National Research Council of Canada	2000.1-2000.9
Lecturer/Associate Prof.	South China University of Technology	1982.7-1994.8

Education

July 1998 - Dec. 1999	Postdoctoral Fellow in Intelligent Systems, University of Calgary, Canada
Sep. 1994- May 1998	PhD, Hong Kong University of Science and Technology, Hong Kong, China
Sep. 1989- Mar 1992	MSc, South China University of Technology (SCUT), Guangzhou, China
Oct. 1978 - July 1982	BSc, South China University of Technology, Guangzhou, China

Research Grants (external)

2023-	\$105,000, Space Defense Technologies, Major Innovation Fund, Alberta
2023-2025	Alberta Innovate \$32,000 - NSERC Alliance, Eliciting Adaptive Sequences for Online Learning
2021-26	NSERC DG \$120,000 Eliciting Adaptive Sequences for Online Learning
2014-15	NSERC Engage \$24,919 Intelligent Resource Management and Well Scheduling
2011-12	NSERC Engage \$25,000 Intelligent Product Lifecycle Management
2010-14	CFI \$33,554 A Multi-agent System Framework for Immersive Education
2008-13	NSERC DG \$75,000 Developing Reasoning Capabilities of Intelligent Agents for Adaptive Learning
2003-2007	NSERC DG \$68,000 Knowledge Modeling for Adaptive Course Generation & Delivery

Honors and Awards

2019	IEEE Leadership Award	IEEE Computer Society
2018	IEEE Leadership Award	IEEE Computer Society
2018	Best paper award	IEEE International Conf. on Cyber, Physical & Social Computing
2014	Best paper award	IEEE International Conf. on Computational Science & Engineering
2012	Craig Cunningham Memorial Award for Teaching Excellence	Athabasca University
2009	Leaders Opportunity Fund Award	Canada Foundation for Innovation

Professional Services

2021-present	Coordinator of Intelligent Systems and Machine Learning Research Cluster, AU FST
2022	Workshop co-Chair of International Workshop in Adaptive Cyber Learning, Nov. 13-17, 2023
2022	Workshop co-Chair of International Workshop in Adaptive Cyber Learning, Sept 13-15, 2022
2021	co-General Chair of IEEE Cyber Science and Technology Congress 2021, online
2021	General Chair of the Second International Workshop on Adaptive Cyberlearning, online
2020	co-General Chair of IEEE Cyber Science and Technology Congress 2020, online
2020	General Chair of the First International Workshop on Adaptive Cyberlearning, online
2019	Executive General Chair of IEEE Cyber Science and Technology Congress 2019 Japan
2009-2013	Editor-in-Chief, International Journal of Distance Education Technologies (IJDET)
2014-present	Advisory Board Member, International Journal of Distance Education Technologies (IJDET)
2007-present	Member of editorial board, Journal of Educational Technology & Society

Administrative Appointments

July 1, 2023- present,	Graduate Program Director of Faculty of Science and Technology, Athabasca University
Jan 2016-Jun 2018	Associate Dean, Faculty of Graduate Studies of AU

Jul 2010-Dec 2015 Chair, School of Computing & Information Systems, Faculty of Science and Technology (FST),

Jul 2006-Jun 2010 Program Coordinator of MSc Information Systems of AU

Committees

2022 – present Member of Research Ethics Board of AU,
Chair of Departmental Research Ethics Review Committee
2022, 2016, 2009 Member of MSc IS program review committee, FST AU
2020-present IEEE Cyber Science and Technology Congress, Steering Committee
2019 External Reviewer, MSc Information Technology program, Concordia University of Edmonton
2016-2018 Chair, Professional Development Skills Program Committee, Faculty of Graduate Studies, AU
2016-present Member of Undergraduate Program Council, FST AU
2016-present Member of Strategic Plan Implementation Committee, FST AU
2016 Canadian Research Chair hiring committee, FST AU
2014 Member of NSERC Industrial Chair Site Visit Review Committee

Memberships

Senior Member Association of Computing Machinery (ACM)
Senior Member IEEE, Computer Society, Education, SMC
Member AI in Education (AIED)
Member Canadian AI Association (CAIAC)
Member The Association for the Advancement of Artificial Intelligence (AAAI)

Projects Participations

2002-2004 EduSource: Canada's Learning Object Repository Network
2010-2015 NSERC/iCORE/Xerox/Markin Industrial Research Chair for Adaptivity & Personalization in Informatics

Subjects Taught

AU: Data Structure, Algorithms, Multiagent Systems, Distributed Systems, Software Engineering.
SCUT: Calculus, Data Structure, C, COBOL, Pascal, dBase III

Current Research Interests

- **Intelligent Tutoring Systems/Adaptive Learning** - the modelling and simulation of AI algorithms for domain modeling, learner modeling and inference engines for constructing adaptive learning systems in online learning environments to provide personalized course materials and instant feedback to online learners.
- **Multiagent Systems**- the study on collective design making using multiagent algorithms such as voting, contract net protocol, combinatorial auction, and market mechanism.
- **Reinforcement Learning** - the study on Multiarmed Bandit (MAB) algorithms for sequential decision making, online scheduling in education, manufacturing, and transportation.

Graduate Student Supervision (since 2001)

I co-supervised or am co-supervising 5 PhD students, 53 MSc students, and 34 BSc students.

Books Authored or Edited

Rajinikanth, V., H. Lin & F. Lin (eds.) Hybrid Image Processing Methods for Medical Image Examination, CRC Press, 2020
Kumar, V., F. Lin (eds.) Systems and technologies Advancements in Distance Learning, Infor. Sci. Pub., 2013
Graf, S., F. Lin, Kinshuk, R. McGreal, (eds.) Adaptivity and Intelligent Support in Learning Environments, IGI, 2011.
Lin, F. (ed.). (2004). Designing Distributed Learning Environments with Intelligent Software Agents, Infor. Sci. Pub.
F. Lin & J. Feng, (1989). Data Structure: Practice and Improvement, SCUT

Journal and Conference Publications

Intelligent Tutoring Systems/Adaptive Learning

Nguyen, D., Leo, H., Yan, H., Lin, F. A Contextual Multi-Armed Bandit Approach to Personalizing Learning Paths, IEEE International Workshop on Adaptive Cyber Learning (ACL) 2023, Abu Dhabi, Nov. 13-17, 2023.
G. Jhaji, M. Ali A. Dewan & F. Lin, Unveiling Uncertainty: Supporting Learners Through NLP-Driven Confusion Identification, IEEE International Workshop on Adaptive Cyber Learning (ACL) 2023, Abu Dhabi, Nov. 13-17.
Md R. Kabir, M Ali Akber Dewan, Fuhua Lin, [Lightweight Model for Emotion Detection from Facial Expression in Online Learning](#), 2023 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE), 174-179

- Kabir, M. R. and Lin, F., An LLM-powered Adaptive Practicing System, [Proceedings of the Workshop on Empowering Education with LLMs - the Next-Gen Interface and Content Generation 2023](#), co-located with 24th International Conference on Artificial Intelligence in Education (AIED 2023), Tokyo, Japan, July 7, 2023.
- Arta Farahmand, M Ali Akber Dewan, Fuhua Lin, Wu-Yuin Hwang, [Improving Students' Self-awareness by Analyzing Course Discussion Forum Data](#), International Conference on Human-Computer Interaction 2023, 3-14
- Lin, F. and de Silva, S., An Approach to Generating Adaptive Feedback for Online Formative Assessment, International Conference on Intelligent Tutoring Systems (ITS) 2023, Corfu, Greece, June 2-5, 2023.
- Yan, H., Lin, F., Kinshuk, 2022, [Removing Learning Barriers in Self-paced Online STEM Education | Canadian Journal of Learning and Technology \(cjl.ca\)](#)
- Lin, F., Howard, L., & Yan, H., Learning Optimal and Personalized Knowledge Component Sequencing Policies, Artificial Intelligence in Education (AIED 2022), 27-31 July, Durham University, UK
- Yan, H., Lin, F., & Kinshuk. (2021). Including Learning Analytics in the Loop of Self-Paced Online Course Learning Design. *Int. J. Artif. Intell. Educ.* <https://doi.org/10.1007/s40593-020-00225-z>
- Mui, J., F. Lin, A. Dewan, Multiarmed Bandit Algorithms for Online Adaptive Learning: A Survey. Artificial Intelligence in Education (AIED 2021), Utrecht, The Netherlands, I. Roll et al. (Eds.), LNAI 12749, 273–278
- Lin, F., Adaptive Quiz Generation Using Thompson Sampling, Third Workshop on Eliciting Adaptive Sequences for Learning (WASL 2020), co-located with AIED 2020.
- Huang, L., F. Lin, and E. Wang, [Online Vocabulary QuizMAStEr Game for College English Test Band 4](#), (WiP) IEEE Internet of People (IoP) 2018.
- Laberge, S. & Lin, F. Simulated Learners for Testing Agile Teaming in Social Educational Games, CEUR Workshop Proceedings (AIED Workshop on Simulated Learners 2015), vol. 1432, pp 65-77, 2015.
- Dutchuk, M., K. A. Mohammadi, F. Lin (2009), QuizMAStEr - A Multi-Agent Game-Style Learning Activity, EduTainment 2009, Aug 2009, Banff, Canada, Learning by Doing, (eds.), M Chang, et al, LNCS 5670, 263-272.
- Lin, F., M. Dewan, & A. Newcomb, (2015) User Modeling for Course Planning and Scheduling, chapter 9, 2015 Proceedings of Science and Technology Innovations, 121-136
- Lin, F., Kinshuk, R. McGreal, S. Leung, D. Wen, F. Zhang, Q. Li, X. Liang, (2008), [e-Advisor: A Web-based Intelligent System for Academic Advising](#), Intl. Transactions on Systems Science and Applications, 4(1), 89-98
- Leung, S., F. Lin, D. Wen, Towards a Data-driven Ontology Engineering Framework, C1: AIED/ITS and Adaptive Learning, ICCE 2008, October 27-31, Taipei, Taiwan.
- Deline, G., F. Lin, D. Wen, D. Gašević, & Kinshuk, (2009) A Case Study of Ontology-Driven Development of Intelligent Educational Systems, Special Issue on Intelligent and Adaptive Web-based Educational Systems. *Int. J. of Web-Based Learning and Teaching Technologies*, 4(1), 66-81, January-March 2009
- Armstrong, AJ & F. Lin, Modelling and Personalizing Curriculum with Colored Petri Nets, ICCE 2010 (WIPP).
- Lin, F., Zhang, F., & Wen, D. Developing MAS for Academic Advising, Proc. of the 2nd International Workshop on Agent-based Systems for Human Learning, AAMAS 2006, Future University-Hakodate, Japan, 49-54
- Lin, F., Leung, S., Wen, D., & Zhang, F., An Intelligent System for Academic Advising, Proc of the 10th Annual Global Chinese Conf on Computers in Education: Research & Practice on Info. Tech. in Education, Beijing, June 2006, 101-115.
- Shabani, S., F. Lin, and S. Graf, (2012), A Framework for User Modeling in QuizMAStEr. *J of e-Learning and Knowledge Society*, 8(3), 1826 - 6223. [PDF](#)
- Meller, T., E. Wang, F. Lin, & C. Yang, [New Classification Algorithms for Developing Online Program Recommendation Systems](#), *Intl. Conf. on Mobile, Hybrid & On-line Learning, Feb. 2009*, Cancun, Mexico, 67-72.
- Wen, D.; Lin, F., (2008), Ways and Means of Employing AI Technology in E-Learning Systems, *Advanced Learning Technologies*, 8th IEEE International Conference on, 1-5 July 2008, 1005-1006
- Deline, G., F. Lin, D. Wen, D. Gašević, Kinshuk, Ontology-Driven Development of Intelligent Educational Systems, 2007 IEEE Pacific Rim Conference on Communications, Computers and Signal Processing.
- Stauffer, K., F. Lin, and M. Koole (2008), A Methodology for Developing Learning Objects for Web Course Delivery, *Journal of Distance Education Technologies*, 6(3), 58-68, 2008.
- Lin, F. & Wen, D. (2007). Ontologies in an Intelligent System for Academic Advising, The Global Chinese Conference on Computers in Education (GCCCE), May 26-30, Guangzhou, China.
- Lin, Holt, Leung & Li (2006). [A multiagent and service-oriented architecture for developing adaptive eLearning systems](#). *International Journal of Continuing Engineering Education and Life-Long Learning*, 16(1/2), 77-91
- Lin, F., Li, Q., & Wen, D. (2005). Knowledge Modelling for developing program planning agents, *Proceedings of International Conference of E-Business 2005*, Hong Kong, Dec.6-9. 366-371.
- Wen, D., Dickson, K., & Lin, F. (2005). Knowledge Modelling for Readiness Self-assessment, *Proceedings of International Conference of E-Business 2005*, Hong Kong, Dec.6-9. 340-345

Holt, P., Pu, Q., Lin, F., & Wang, H., (2002). A Distributed Adaptive Learning Environment, Proceedings of Global Chinese Society for Computers in Education (GCCCE), Beijing China.

Multiagent Systems

- Solter, A., F. Lin, D. Wen, X. Zhou, [Data-Driven Multi-Agent Vehicle Routing in a Congested City](#), Information 2021, 12(11), 447
- Lad, K., Akber Dewan, M. A., & Lin, F. Trust Management for Multi-Agent Systems Using Smart Contracts. 2020 IEEE Intl Conf on Dependable, Autonomic and Secure Computing, Intl Conf on Pervasive Intelligence and Computing, Intl Conf on Cloud and Big Data Computing, Intl Conf on Cyber Sci. & Tech. Congress, 414–419.
- Prince, M. & F. Lin, [Hunting Algorithm Visualization and Performance Evaluation through BDI Agent Simulation](#), IEEE CyberSci&Tech 2018. Athens, Greece, Aug. 12-15, 2018.
- Vassiliev, A., F. Lin, A. Dewan, [Combinatorial Auction Based Mechanism Design for Course Offering Determination](#), in Book entitled Digital Human Modeling. Applications in Health, Safety, Ergonomics, and Risk Management: Ergonomics and Design: 8th Intl Conf, DHM 2017, HCI Intl 2017, Vancouver, Canada, July 9-14, Proc., Part I, 376-392
- Lange, G., F. Lin, [Modeling Well Scheduling as a Virtual Enterprise with Intelligent Agents](#), IEEE CSE 2014, Chengdu, China (Best Paper)
- Laberge, S., T. Lenihan, S. Shabani, & F. Lin, [Multiagent Coordination for Planning and Enacting an Assessment Game](#), WS on Multiagent Systems based Learning Environments, ITS 2014, Honolulu - Hawaii, USA
- Lin, F., W. Chen, Designing a MAS for Course Offering Determination, 16th International Conference on Principles and Practice of Multi-agent Systems (PRIMA 2013), 1-6 December 2013, Dunedin, New Zealand
- Lin, F., A. J. Armstrong, & A. Newcomb, [A MAS Approach to Course Offering Determination](#), Proc of the 2012 IEEE/WIC/ACM Intl Joint Conf on Web Intelligence and Intelligent Agent Technology - 03, 331-336 [PDF](#)
- Blair, J. & F. Lin (2011). An Approach for Integrating 3D Virtual Worlds with Multiagent Systems, ISeRim workshop - IANA 2011 (March 2011; Singapore)
- Scutelnicu, A., F. Lin, Kinshuk, T-C Liu, S. Graf, & R. McGreal (2007), Integrating JADE Agents into Moodle, The first workshop on Intelligent and Adaptive Web-based Educational Systems, ICCE 2007, Hiroshima, Japan
- Lin, F., Leung, S., Wen, D., Zhang, F., Kinshuk, & McGrael, R. (2007). E-Advisor: An Multi-agent System for Academic Advising, Workshop on Agent-Based Systems for Human Learning and Entertainment (ABSHLE) at Autonomous Agents and Multi-Agent Systems (AAMAS) 2007, May 15, 2007, Honolulu, Hawaii, USA.
- Liu, Y., C Yang, Y Yang, F Lin, and X Du, (2009) Case Learning in CBR-Based Agent Systems for Ship Collision Avoidance, 12th International Conference on Principles of Practice in Multi-Agent Systems, Japan, Dec. 2009.
- Lin, F., Kinshuk, & M Dutchuk, Multiagent architecture for incorporating adaptivity feature into 3D learning environments, The 6th Intl WS on Mobile & Ubiquitous Learning Environments, Sept, 2009, AU, Canada, 33-35
- Chang, M., Q. Tan, T-C Liu, F. Lin, Multi-agent Architecture based Location-aware Service Project for Ubiquitous Learning, WS on Ubiquitous Learning Models for K-12, Higher Education, and Adult Education, ICCE 2008, October 27-31, 2008, Taipei, Taiwan.

Intelligent Systems, AI, and Machine Learning

- Soares, D., Dewan, A. & Lin, F., Hoeffding Decision Tree Based Approach for Soil Classification, The 35th Canadian AI 2022, 30 May-3 June 2022, Toronto (virtual), Ontario, Canada.
- Boulanger, D., Dewan, A., Kumar, V., Lin, F. Interpretable Detection of Affective Engagement for Online Learners on Edge Devices. In Pro of the 19th IEEE International Conference on Pervasive Intelligence and Computing
- Dewan, A., F. Lin, Kinshuk, [Dynamic Pricing Mechanism for Multi-Agent Based System of Well Scheduling](#), *5th International Conference on Informatics, Electronics & Vision (ICIEV)*, 1104 - 1108, 2016
- Lin, F., A. Dewan, M. Nguyen, [Optimizing Rescheduling Intervals through Using Multi-Armed Bandit Algorithms](#), IEEE CPSComp 2018 (Best paper)
- Dewan, A., D. Qiao, F. Lin, D. Wen, and Kinshuk, [An Approach to Improving Single Sample Face Recognition Using High Confident Tracking Trajectories](#), R. Khoury & C. Drummond (Eds.): Canadian AI 2016, LNAI 9673, 115-121, 2016.
- Wu, B., X. Zhou, Q. Jin, F. Lin, and H. Leung, Analyzing of Social Roles Based on a Hierarchical Model and Data Mining for Collective Decision-Making Support, IEEE Systems Journal, PP, 99, 1-10, January 2015.
- Wu, B., Q. Jin, X. Zhou, W. Wang, F. Lin, H. Leung (2013), [Dynamically Identifying Roles in Social Media by Mapping Real World](#), Awareness Sci. and Tech. and Ubi-Media Comput, 2013 Intl Joint Conf on, 573-579
- Liu, Y., C. Yang, Y. Yang, F. Lin, & X. Du, (2012), [Case Learning for CBR-Based Collision Avoidance Systems](#), International Journal of Applied Intelligence (ISSN: 0924-669X). March, 36(2), 308-319

- Lin, F. & Norrie, D. H. (2001). Schema-based conversation modeling for agent-oriented manufacturing systems. *Computers in Industry*, 46, 259-274
- Wen, D., Fan, X., & Lin, F. (2006). FORPM: Boosting Users' Effect on Ontology Matching, International Workshop on Ontology Matching (poster paper). Proc of the 5th Intl Semantic Web Conf., Athens, Georgia, USA, 231-235.
- Hristov, J., G. Lange, F. Lin, A. Dewan, X. Zhang, and S. Khan, Multi-Agent Well Scheduling: A Prototype Implementation Using CNP and JADE, Chapter 10, 2015 Proc of Science and Technology Innovations, 137-153
- Lin, F. (2001). Multimedia and Multi-stream Synchronization. In T. K. Shih (Ed.), *Distributed Multimedia Databases: Techniques and Applications* (pp. 245-260). Information Science Publishing.
- Lin, F., Norrie, D. H., Shen, W., & Kremer, R. (2000). Schema-based Approach to Specifying Conversation Policies. In F. Dignum and M. Greaves (Eds.), *Issues on Agent Communications*, LNAI 1916, 193-204. Springer-Verlag.
- Kirkbride, P., A. Dewan, F. Lin, Game-Like Captchas for Intrusion Detection, IEEE Cyber Science and Technology Congress 2020, Online, Aug.17-24, 2020

Learning Technologies

- Farahmand, A., Dewan, M. A., Lin, O., Hwang, W-Y, Improving Students' Self-Awareness by Analyzing Course Discussion Forum Data, Theoretical and Practical Applications of Reinforcement Learning for Adaptive Instructional Systems, HCII2023
- Dewan, A., W. M. Pachon, F. Lin, A Review on Visualization of Educational Data in Online Learning, International Conference on Web-based Learning, Shanghai, China, 2020.
- Farahmand, A., A. Dewan and F. Lin, Student-Facing Educational Dashboard Design for Online Learners, The 1st International Workshop on Adaptive Cyber Learning 2020. 2020 IEEE Intl Conf on Dependable, Autonomic and Secure Computing, Intl Conf on Pervasive Intelligence and Computing, Intl Conf on Cloud and Big Data Computing, Intl Conf on Cyber Science and Technology Congress, 345-349
- Al-Shamali, F., H. Yan, S. Graf and F. Lin, Educational Data Mining and Personalized Support in Online Introductory Physics Courses, International Conference on Educational Data Mining 2020.
- S. Dash, M. A. Akber Dewan, M. Murshed, F. Lin, M. Abdullah-Al-Wadud and A. Das, "A Two-Stage Algorithm for Engagement Detection in Online Learning," 2019 Intl Conf on Sustainable Technologies for Industry 4.0 (STI), Dhaka, Bangladesh, 2019, 1-4
- Dewan, A., M. Murshed, F. Lin, Engagement Detection in Online Learning: A Review, *Journal of Smart Learning Environments*, Springer (Open Access), January 2019
- Romanowska, K., G. Singh, A. Dewan, F. Lin, [Towards Developing an Effective Algorithm Visualization Tool for Online Learning](#), (WiP) IEEE Internet of People (IoP) 2018
- Dewan, A., F. Lin, D. Wen, M. Murshed and Z. Uddin, [A Deep Learning Approach to Detecting Engagement of Online Learners](#), IEEE Internet of People (IoP) 2018
- Nincic, V., M. Chang, & F. Lin. dMLRid – An XML-based Proof-of-Concept Mobile DRM Framework for Sharing Learning Content among Mobile Network. 2010 Intl Conf on Info. Security & AI. Chengdu, China. Dec, 2010.
- M, Procter, F. Lin, B. Heller, [Intelligent Intervention by Conversational Agent Through Chatlog Analysis](#), *Journal of Smart Learning Environments*, Springer (Open Access), Nov. 2018
- Procter, M., B. Heller, F. Lin, [Classifying Conversational Behaviors of the students through Dialog Analysis](#), International Conference on Intelligent Tutoring Systems, 2018, Montreal, Canada. LNCS, 10858, 373-379.
- Procter, M., B. Heller, F. Lin, [Assessing the impact of intelligent interventions by conversational agents: Implications for pedagogical agent design](#), E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education, 2017 in Vancouver, BC, Canada, Asso. for the Advancement of Comput. in Education
- Procter, M., F. Lin, and R. Heller, [Improving Conversation Engagement Through Data-Driven Agent Behavior Modification](#), R. Khoury and C. Drummond (Eds.): Canadian AI 2016, LNAI 9673, pp.270-275, 2016
- Chang, M., D. Lachance, F. Lin, F. Al-Shamali, N-S Chen, (2015), [Enhancing Orbital Physics Learning Performance through a Hands-on Kinect Game](#), *Education and Science*. Vol 40 (2015) No 180 1-12
- Nincic, V., Chang, M., & Lin F., dMLRid: An XML-Based Proof-of-Concept Mobile DRM Framework for Sharing Learning Contents among Mobile Networks, *Intern. J. of Infor. & Electronics Engg.*, 3(2), 2013, 180-184. PDF
- Dewan, A., F. Lin, D. Wen, Kinshuk, "[Predicting dropout-prone students in e-learning education system](#)," IEEE Intern. Conf. on Ubiquitous Intelligence & Computing, 1935-1740, Beijing, China, 2015.
- Graf, S., K. MacCallum, T-C Liu, M. Chang, D. Wen, Q. Tan, J. Dron, F. Lin, R. McGreal, & Kinshuk (2008), An Infrastructure for Developing Pervasive Learning, PerEL 2007, Hong Kong, China.
- Eap, T. M., D. Gašević, Kinshuk, F. Lin, (2008). Personalized Mobile Learning Content Delivery: A Learner Centric Approach, *Int. J. Mobile Learning and Organisation*.

- Liu, T-C, Kinshuk, S-C Wang, Y-C Lin, F. Lin, & M. Chang, The Effects of Students' Cognitive Styles upon applying computer multimedia to change statistical misconceptions, e-Learn 2007, Canada.
- Ally, M., Lin, F., McGreal, R., & Woo, B. (2005). An Intelligent Agent for Adapting and Delivering Electronic Course Materials to Mobile Learners, Proceedings of m-Learn 2005, H. van der Merwe & T. Brown (Eds.), Cape Town, South Africa, Oct. 25-28, 2005, 1-5
- Lin, F., Ally, M., Leung, S., Li, Q., & McGreal, R. Towards Agent-Enhanced Web-Based Education Systems, CD-ROM for the proc of the 9th Global Chinese Society for Computers in Education, 2005, June 6-9, Hawaii, USA
- Hogeboom, M., & Lin, F. (2005). Constructing Knowledge Bases for e-Learning Using Protégé 2000 and Web Services, Proc of the 19th Intl Conf on Advanced Information Networking and Applications, Taipei, Taiwan, March 28-30, 215-220, vol. 1.
- Cao, Y., Lin, F., McGreal, R. Schafer, S., Friesen, N., Tin, T., Anderson, T., Kariel, D., Powell, B., & Anderson, M. (2004). Facilitating E-learning with a MARC to IEEE LOM Metadata Crosswalk Application. In Orchard, B., Yang, C., & Ali, M. (Eds.). Innovations in Applied AI: 17th Intern. Conf. on Industrial and Engineering Applications of AI and Expert Systems, Ottawa, Canada, May 17-20, 739-748.
- Lin, F., & Poon, L. (2004). Agents for Maintaining On-line Learning Course Materials, Innovations in Applied Artificial Intelligence: 17th International Conference on Industrial and Engineering Applications of Artificial Intelligence and Expert Systems, IEA/AIE 2004, Ottawa, Canada, May 17-20, 848-856.
- Lin, F., Holt, P., Leung, S., Hogeboom, M., & Cao, Y. (2004). A Multi-Agent and Service-Oriented Architecture for Developing Integrated and Intelligent Web-based Education Systems, Proceedings for the Workshop on Applications of Semantic Web Technologies for Web-based ITS, Intelligent Tutoring Systems (ITS), 11-20.
- Holt, P., Lin, F., Wang, H., & Pu, Q. (2003). A Learner-Centered Distributed Learning Environment. WSEAS Transactions on Communications (2-3), 271-276
- Shih, T. K., Antoni, G. D., Arndt, T., Asirvatham, A., Chang, C.-T., Chee, Y. S., Dow, C.-R., Jin, Q., Jung, I., Leong, H. V., Li, S.-T., Lin, F., Liu, J., Sala, N. & Wang, & Y.-H. (2003). A Survey of Distance Education: Challenges and Technologies. Journal of Distance Education Technologies, 1(1), 1-21, 2003
- Holt, P., Lin, F., Wang, H., & Pu, Q. (2003). A Learner-Centered Distributed Learning Environment. WSEAS Transactions on Communication (2-3), 271-276
- Lin, F., Holt, P., Leung, S., Maton, C., & Holmberg, C. (2002). An Agent-Oriented Approach to Modeling Distributed Learning Systems, Proc of the 6th IASTED Intl Conf on Software Engineering & Applications, Nov. 4-6, Cambridge, USA, 124-129.
- Yang, C., Lin, F., & Lin, H., (2002). Policy-based Privacy and Security Management for Collaborative E-Education Systems, Proc of the IASTED Intl Conf on Computers and Advanced Technology in Education (CATE 2002), (Eds.) Gustavo A. Santana Torrellas, Vladimir Uskov, May 20-22, 2002, Cancun, Mexico, ACTA Press, 501-505,
- Arat Faramand, H. Yan, M. A. A. Dewan, F. Lin. Removing Barriers in Self-Paced Online Learning Through Designing Intelligent Learning, 2021. Dashboards. Book entitled "Artificial Intelligence in STEM Education: The Paradigmatic Shifts in Research, Education, and Technology", Taylor & Francis.
- Maiga, M., Q. Tan, F. Lin, & T-C Liu, (2009), Multi-Agent Architecture and Location-Based Ubiquitous Learning Framework, in Book edited by Q. Li & T. K. Shih, Ubiquitous Multimedia Computing, CRC Press, 341-354.
- Esmahi, L., & Lin, F. (2004). A Multiagent Framework for an Adaptive E-earning System. In F. Lin (Ed.), Designing Distributed Learning Environments with Intelligent Software Agents, 218-241, Info. Sci. Pub..
- Lin, F. (2004). Knowledge Modeling for Designing Learning Objects. In R. McGreal (Ed.), Online Education using Learning Objects (pp.314-330). London: Routledge/Falmer.
- Lin, F., Esmahi, L., & Poon, L. (2004). Integrating Agent Technology and Web Services into Distributed Learning Environments. In F. Lin (Ed.), Designing Distributed Learning Environments with Intelligent Software Agents (pp. 184-217). Information Science Publishing.
- Yang, C., Lin, H., & Lin, F. (2006). Designing Multiagent-based Education Systems for Navigation Training. Proceedings of the 5th IEEE International Conference on Cognitive Informatics. Beijing. July 17-19, 2006
- Wen, D., Xiong, J., Ally, M., & Lin, F. (2006). An SMS based knowledge querying system for mobile learning. mLearn 2006 - the 5th World Conference on Mobile Learning. Banff, Canada.
- Shih, T. K., Chiu, C-F, Hsu, H-H, & Lin, F. (2002). An integrated framework for recommendation system in e-commerce. Industrial Management & Data Systems, 102(8 & 9), 417-431.
- Yang, C., Phan, S., Kuo, P., & Lin, F. (2001). Applying Collision Avoidance Expert System to Navigation Training Systems as an Intelligent Tutor, Proc of the 14th Intl Conf on Industry & Engineering Application of AI & Expert System, Budapest, Hungary. June 4-7. LNCS2070, 941-947.
- Lin, F., (2001). Modeling Online Instruction Knowledge for Virtual Training Systems using Petri Nets, Proc of IEEE Pacific Rim Conf on Comm., Computers & Signal Processing, Aug 26-28, Victoria, B.C., Canada, I, 212-215.

- Lin, F., & Holt, P. (2001). Towards Agent-based Online Learning, Proc of the 4th IASTED Intl. Conf. on Computer & Advanced Tech. in Education, June 27-29, Banff, Canada, Calvert, T., & Keenan, T. (Eds.), ACTA Press, 124-129
- Lin, F., Holt, P., Korba, L., & Shih, T. K. (2001). A Framework for Developing Distance Learning systems, CD-ROM Proceedings of Conference on Advances in Infrastructure for Electronic Business, Science, and Education on the Internet. SSGRR 2001 L'Aquila, Italy, Aug 6-12, 2001, the abstract in The Book of Abstracts.
- Holt, P., Lin, F., Stauffer, K., Jelica, G., & Shih, T. K. (2001). An Infrastructure for Developing Agents for Distance Education on the Internet. Journal of Computers, Special Issue on Distance Learning, 13(2), 77-92.
- Lin, F., G. Chen, C. Hong, and G. Wang, [Design Scheme of Knowledge-Based Computer-Aided Exam-Paper Formation Systems](#), Journal of Software, Vol. 6 Supplement, 1995, 194-201.
- Lin, F., G. Chen, C. Hong, X. Wu, & L. Li, [Knowledge Acquisition and Representation in Computer-Aided Exam-paper Formation System](#), Journal of South China University of Technology, 23(9), 1995, 127-132.
- Lin, F., G. Chen, C., S. Tang, & Y. Liu, [Algorithms Solving Computer-Aided Exam-paper Formation Problem](#), Journal of South China University of Technology, 23(9), 1995, 58-65.
- Lin, F. (2008). [Book review: Semantic Web and Education](#), V. Devedzic, Educational Tech. & Society, 11(3), 292-293.
- McGreal, R., Anderson, T., Hubick, C., Lin, F., Sosteric, M., Tin, T., & Yasynska, O. (2005). Case Study: eduSource and the Athabasca University Digital Library Project, E-Learning Network News, 1(1).
- Hogeboom, M., & Lin, F. (2004). Developing Domain Model Web Services for Agent-supported Distributed Learning Using PROTÉGÉ 2000, IEEE TCLT, Learning Tech. newsletter, Kinshuk (Ed.), 6(2), 42-45
- Lin, F. (2001). A Critique of Stephen Downes' Article, "Learning Objects": A Chinese Perspective. International Review of Research in Open and Distance Learning. July, ISSN: 1492-3831, V2.1.

Virtual Reality (VR), Augmented Reality (AR), Extended Reality (XR) and Virtual Worlds

- Hwang, WY., Lin, YJ., Hoang, A., Nurtantyana, R., Lin, O. (2022). Facilitating Geometry Learning Through Real-Time Collaborative Activities with Augmented Reality in Authentic Context. In: Huang, YM., Cheng, SC., Barroso, J., Sandnes, F.E. (eds) Innovative Technologies and Learning. ICITL 2022. Lecture Notes in Computer Science, vol 13449. Springer, Cham. [Facilitating Geometry Learning Through Real-Time Collaborative Activities with Augmented Reality in Authentic Context | SpringerLink](#)
- Leung, S., S. Virwaney, F. Lin, AJ Armstrong, A. Dubbelboer, TSI-enhanced Pedagogical Agents to Engage Learners in Virtual Worlds", International Journal of Distance Education Technologies, 11(1), 2013. 1-13. [PDF](#)
- Lin, F., Ye, L., Duffy, V. G., & Su, C-J. (2002). Developing Virtual Environment for Industrial Training. Information Sciences, SI: Interactive virtual environments & distance education, 140 (1-2), 153-170, Thomson Scientific
- Xia, N., F. Lin, A. Li, Chapter 8. Modeling and visualization of fruit trees in horticulture, In book entitled "Computers and Education" edited by Sergei Abramovich (2012), Nova Science Publishers.
- Lin, F. (2002), Virtual Training Scenario Analysis Using Petri Nets. In T. K. Shih & P. P. Wang (Ed.), Intelligent Virtual World: Technologies & Applications in Distributed Virtual Environments, 213-223. World Scientific Pub. Co.
- Su, C., Lin, F., Ye, L., Finney, C. M., & Duffy, V. G. (1997). Industrial training using virtual reality. In M.J. Smith, G. Salvendy, & R. J. Koubek (Eds.), Design of Computing Systems: Social and Ergonomic Considerations, Advances in Human Factors/Ergonomics 21B, 989-992. Elsevier.

e-Heath

- Mikhail Vinogradov, Maiga Chang, Fuhua Lin, and Yang Yan, (2022) Improving Student Mental Health through Health Objectives in a Mobile App, (eds.) G. A. Papadopoulos, A. Achilleos, E. Pissaloux, R. Velázquez, ICT for Health, Accessibility and Wellbeing, Proc. of Second International Conference, IHAW 2022, Larnaca, Cyprus, December 5–7, 2022, Pages 110-123, Springer. <https://link.springer.com/book/10.1007/978-3-031-29548-5>