Jason Lin (林傑森)

CONTACT

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RESEARCH INTERESTS

Document Engineering, Geospatial Intelligence, Quantum Cryptography

HIGHEST EDUCATION

Texas A&M University, College Station, TX May 2020
Ph.D. in Computer Engineering

- Dissertation: *"Modeling of Reasoning Flows in Scientific Publications"*
- Advisor: Dr. Jyh-Charn Liu

PROFESSIONAL EXPERIENCE

Department of Computer Science and Engineering, National Chung Hsing University, Taichung, Taiwan

- Assistant Professor, Feb. 2021 – present

International School of Technology and Management, Feng Chia University, Taichung, Taiwan

- Adjunct Assistant Professor, Feb. 2021 – present
- Assistant Professor, Aug. 2020 – Jan. 2021

SELECTED HONORS

2019: SIGWEB DocEng Best Student Paper Award, ACM
2019: Graduate Student Travel Award, Texas A&M University
2015: SBP Student Travel Award, Arizona State University
2010: National Finalist, Microsoft Imagine Cup, Creative Digital Group
2009: First Prize Award, Chunghwa Telecom Innovation & Application Contest, MOD Group

PROFESSIONAL SERVICES

Reviewer, Entropy, 2021 – present
Reviewer, Symmetry, 2020 – present
Reviewer, Applied Sciences, 2020 – present
Reviewer, Modern Physics Letters A, 2019 – present
Reviewer, International Journal of Theoretical Physics, 2015 – present
Reviewer, Quantum Information Processing, 2012 – present

SPONSORED PROJECTS

"Timing Intrusion Management Ensuring Resiliency (TIMER)"

- Funding Agency: U.S. Department of Energy
- Project Cost: $4.4 million
- Working Period: Aug. 2019 – Apr. 2020
- Role Description: Assist in documentation and verifications of the multithreading PC monitor codebase that communicate with various GPS timing devices such as GPSDO and IRIG-B.

"Probabilistic Forecast Tracking and Calibration Software System"

- Funding Agency: Apache Corporation
- Project Cost: $112k
- Working Period: Jan. 2017 – Aug. 2018
- Role Description: Developed a web application to help users measure and improve their ability to assess uncertainty.

"Context-Aware Mission Auditing System"

- Funding Agency: Air Force Research Laboratory
- Project Cost: $35.0k
- Working Period: Sept. 2016 – Feb. 2017
- Role Description: Formulated a system framework of operational process discovery, learning, and adaptation for military mission optimization.

"MECH: Algorithms and Tools for Automated Assessment of Potential Attack Locations"

- Funding Agency: Office of Naval Research
- Project Cost: $622k
- Working Period: Jul. 2013 – Oct. 2015
- Role Description: Modeled the tactical behavior in asymmetric warfare based on their perception of environmental elements and conflict events.

OTHER PROJECTS

"Mathematical Expression Based Content Analysis Software"

- Working Period: Jun. 2018 – May 2019
- Role Description: Developed a graphic organizer system of mathematical expressions and their physical semantics in PDF documents.

"3D Multi-view Geographic Information Systems"

- Working Period: Feb. 2017 – Apr. 2017
- Role Description: Designed and implemented a database system with PostgreSQL to manage and handle multiple-user positioning on Google map API requested from different Microsoft HoloLens devices.

"Sport-Team Database Design"

- Working Period: Sept. 2014 – Nov. 2014
- Role Description: Designed schema and ER diagram for sport-team and built a DBMS by interfacing MySQL and Java via JDBC for all queries and modifications.

TEACHING EXPERIENCE

National Chung Hsing University

- Object-Oriented Programming (Spring 2021)
- Artificial Intelligence (Spring 2021)

Feng Chia University

- ISTM-200: Business Information Management (Spring 2021)
- ISTM-119: Introduction to MATLAB Programming (Spring 2021)
- ISTM-116: Programming Applications for Engineers (Fall 2020)
- GMID-307: Artificial Intelligence and Future Challenges (Fall 2020)

Texas A&M University, College Station

- CSCE-121: Introduction to Program Design and Concepts (Fall 2018) (Spring 2019) (Fall 2019)
- CSCE-221: Data Structures and Algorithms (Spring 2016)
- CSCE-629: Analysis of Algorithms (Fall 2015)
- CSCE-411: Design and Analysis of Algorithms (Spring 2015)
- CSCE-222: Discrete Structures for Computing (Fall 2014)

REFEREED JOURNALS

J1. C.-W. Tsai, C.-W. Yang, **J. Lin**, Y.-C. Chang*, and R.-S. Chang, "Quantum Key Distribution Networks: Challenges and Future Research Issues in Security," *Applied Sciences*, Vol. 11, No. 9, 3767, April 2021. **(IF: 2.474)**

J2. C.-W. Tsai, **J. Lin**, and C.-W. Yang*, "Cryptanalysis and Improvement in Semi-Quantum Private Comparison based on Bell States," *Quantum Information Processing*, Vol. 20, No. 3, 120, Mar 2021. **(IF: 2.433)**

J3. W. Hong, J. Chen, P.-S. Chang, J. Wu, T.-S. Chen, and **J. Lin***, "A Color Image Authentication Scheme with Grayscale Invariance," *IEEE Access*, Vol. 9, pp. 6522-6535, Dec 24, 2020. **(IF: 3.745)**

J4. S.-H. Kao, **J. Lin**, C.-W. Tsai, and T. Hwang*, "An Improved Protocol for Controlled Deterministic Secure Quantum Communication Using Five-Qubit Entangled State" *International Journal of Theoretical Physics*, Vol. 57, No 6, pp. 1894-1902, Mar 2018. **(IF: 1.347)**

J5. C.-W. Tsai and **J. Lin***, "Fault-Tolerant Remote Quantum Entanglement Establishment for Secure Quantum Communications," *International Journal of Theoretical Physics*, Vol. 55, No. 7, pp. 3200-3206, Jul 2016. **(IF: 1.347)**

J6. J. Chen, T.-S. Chen*, C.-N. Lin, S.-Y. Chen, and **J. Lin**, "A Simple JPEG-LS Compressed Technique for 2DGE Image with ROI Emphasis", *The Imaging Science Journal*, Vol. 63, No. 2, pp. 76-80, Feb 2015. **(IF: 1.023)**

J7. **J. Lin**, C.-W. Yang, and T. Hwang*, "Quantum Private Comparison of Equality Protocol without a Third Party," *Quantum Information Processing*, Vol. 13, No. 2, pp. 239-247, Feb 2014. **(IF: 2.433)**

J8. **J. Lin** and T. Hwang*, "Bell State Entanglement Swappings over Collective Noises and Their Applications on Quantum Cryptography," *Quantum Information Processing*, Vol. 12, No. 2, pp.1089-1107, Feb 2013. **(IF: 2.433)**

J9. **J. Lin** and T. Hwang*, "New Circular Quantum Secret Sharing for Remote Agents," *Quantum Information Processing*, Vol. 12, No. 1, pp. 685-697, Jan 2013. **(IF: 2.433)**

J10. **J. Lin**, C.-W. Yang, C.-W. Tsai, and T. Hwang*, "Intercept-Resend Attacks on Semi-Quantum Secret Sharing and the Improvements," *International Journal of Theoretical Physics*, Vol. 52, No. 1, pp. 156-162, Jan 2013. **(IF: 1.347)**

J11. H.-Y. Tseng, **J. Lin**, and T. Hwang*, "New Quantum Private Comparison Protocol Using EPR Pairs," *Quantum Information Processing*, Vol. 11, No. 2, pp. 373-384, Apr 2012. **(IF: 2.433)**

J12. **J. Lin**, H.-Y. Tseng, and T. Hwang*, "Intercept-Resend Attacks on Chen et al.'s Quantum Private Comparison Protocol and the Improvements," *Optics Communications*, Vol. 284, No. 9, pp. 2412-2414, May 2011. **(IF: 2.125)**

J13. **J. Lin** and T. Hwang*, "An Enhancement on Shi et al.'s Multiparty Quantum Secret Sharing Protocol," *Optics Communications*, Vol. 284, No. 5, pp. 1468-1471, Mar 2011. **(IF: 2.125)**

REFEREED CONFERENCES

C1. C.-W. Tsai, **J. Lin**, P.-H. Chen, L. Chiu, C.-W. Yang*, "Lightweight Semi-quantum Private Comparison Protocol," *The 2nd International Symposium on Future ICT (Future ICT 2021)*, Taichung, Taiwan, Feb. 1-5, 2021.

C2. Y.-H. Zhang, T.-S. Chen*, **J. Lin**, and J. Chen, "A Method for Beacon Navigator Based on Non-precise Positioning – an Example of a Campus in Central Taiwan," *The 6th IEEE & 7th The International Conference on Science, Education, and Viable Engineering (ICSEVEN 2020)*, Magong, Penghu, Taiwan, Nov. 5-8, 2020.

C3. **J. Lin**, X. Wang, Z. Wang, D. Beyette, and J.-C. Liu*, "Prediction of Mathematical Expression Declarations Based on Spatial, Semantic, and Syntactic Analysis," *Proceedings of the 19th ACM Symposium on Document Engineering*, Berlin, Germany, Sept 23-26, 2019. **(Best Student Paper)**

C4. D. Beyette, Z. Wang, **J. Lin**, and J.-C. Liu*, "Semi-automatic LaTeX-Based Labeling of Mathematical Objects in PDF Documents: MOP Data Set," *Proceedings of the 19th ACM Symposium on Document Engineering*, Berlin, Germany, Sept 23-26, 2019.

C5. Z. Wang, D. Beyette, **J. Lin**, and J.-C. Liu*, "Extraction of Math Expressions from PDF Documents Based on Unsupervised Modeling of Fonts," *Proceedings of the 15th International Conference on Document Analysis and Recognition*, Sydney, Australia, Sept 20-25, 2019.

C6. D. Beyette, M. Rugh, **J. Lin**, X. Wang, Z. Wang, J.-C. Liu, and R. Capraro*, "DIME: A Dynamic Interactive Mathematical Expression Tool for STEM Education," *Proceedings of the 126th ASEE Annual Conference and Exposition*, Tampa, Florida, Jun 16-19, 2019.

C7. X. Wang, **J. Lin**, R. Vrecenar, and J.-C. Liu*, "QuQn Map: Qualitative-Quantitative mapping of scientific papers," *Proceedings of the 18th ACM Symposium on Document Engineering*, Halifax, Nova Scotia, Canada, Aug 28-31, 2018.

C8. **J. Lin**, X. Wang, and J.-C. Liu*, "Prediction of Mathematical Expression Constraints (ME-Con)," *Proceedings of the 18th ACM Symposium on Document Engineering*, Halifax, Nova Scotia, Canada, Aug 28-31, 2018.

C9. X. Wang, **J. Lin**, R. Vrecenar, and J.-C. Liu*, "Syntactic Role Identification of Mathematical Expressions," *Proceedings of the Twelfth International Conference on Digital Information Management*, pp. 179-184, Fukuoka, Japan, Sept 12-14, 2017.

C10. **J. Lin**, X. Wang, B. Qu, S. George, and J.-C. Liu*, "Strategic Planning and Tactical Situational Awareness Using MECH," *Proceedings of the 20th International Command and Control Research and Technology Symposium*, Annapolis, Maryland, Jun 16-19, 2015.

C11. X. Wang, **J. Lin**, S. George, and J.-C. Liu*, "DT-GIS System for Tactical Pattern Exploration in Asymmetric Conflicts," *Proceedings of the 20th International Command and Control Research and Technology Symposium*, Annapolis, Maryland, Jun 16-19, 2015.

C12. X. Wang, S. George, **J. Lin**, and J.-C. Liu*, "Quantifying Tactical Risk: A Framework for Statistical Classification Using MECH," *Proceedings of the 8th International Conference on Social Computing, Behavior-Cultural Modeling and Prediction*, Washington, D.C., LNCS Vol. 9021, pp. 446-451, Mar 31-Apr 3, 2015.

C13. **J. Lin**, B. Qu, X. Wang, S. George, and J.-C. Liu*, "Risk Management in Asymmetric Conflict: Using Predictive Route Reconnaissance to Assess and Mitigate Threats," *Proceedings of the 8th International Conference on Social Computing, Behavior-Cultural Modeling and Prediction*, Washington, D.C., LNCS Vol. 9021, pp. 350-355, Mar 31-Apr 3, 2015.

C14. C.-N. Lin, C.-C. Chang*, W.-B. Lee, and **J. Lin**, "A Novel Secure Data Hiding Scheme Using a Secret Reference Matrix," *Proceedings of the Fifth International Conference on Intelligent Information Hiding and Multimedia Signal Processing*, Kyoto, Japan, pp. 369-373, Sept 12-14, 2009. **(EI)**

TECHNICAL REPORTS

T1. S. George, X. Wang, **J. Lin**, B. Qu, and J.-C. Liu*, "MECH: Algorithms and Tools for Automated Assessment of Potential Attack Locations," Department of Computer Science and Engineering, Texas A&M University, Oct. 6, 2015.