PRAIRIE VIEW A&M UNIVERSITY

Curriculum Vitae

Faculty Name:	**Dr. Xiangfang (Lindsey) Li**	**Work Address:**	P.O. Box 519; MS 1060 Prairie View, TX 77446
Position Title:	Associate Professor, Department of Electrical & Computer Engineering, Roy G. Perry College of Engineering, Prairie View A&M University		
Office Location:	EE Building 336		
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Education:

Degree and Area of Study	Institution Name	Degree Date
Ph.D. in Dept. of Electrical & Computer Engineering	Rutgers University, Piscataway, NJ	2007
M.S. in Dept. of Electrical & Computer Engineering	Rutgers University, Piscataway, NJ	2003
M.E., Beijing University of Aeronautics and Astronautics	(now known as Beihang University), Beijing, China	1996
B.E., with highest honor	Beihang University	1993

Professional Experience

Position Title	Institution Name	Position Dates (Beginning and End)
Associate Professor	Department of Electrical & Computer Engineering, PVAMU	Sept. 2019-present
Assistant Professor	Department of Electrical & Computer Engineering, PVAMU	2013-Aug. 2019
Postdoc Fellow/TEES Associate Research Scientist	Bioinformatics Training Program, Texas A&M University	2009-2012
Adjunct Professor	Department of Electrical & Computer Engineering, PVAMU	2008-2009
Member of Technical Staff	Civil Aviation Computer Information Center of China	1996-2000

Professional Publications:

(Recent Related Sample Publications)

X. Dong, S. Chowdhury, U. Victor, X. Li, L. Qian. (2022) "Semi-supervised Deep Learning for Cell Type Identification from Single-Cell Transcriptomic Data," *IEEE/ACM Transactions on Computational Biology and Bioinformatics*.

B. Yang, X. Cao, J. Bassey, X. Li and L. Qian (2021), "Computation Offloading in Multi-Access Edge Computing: A Multi-Task Learning Approach," in *IEEE Transactions on Mobile Computing*, vol. 20, no. 9, pp. 2745-2762, 1 Sept. 2021, doi: 10.1109/TMC.2020.2990630.

L. Nwuso, X. Li, L. Qian, S. Kim, and X. Dong (2021). "Semi-supervised Learning for COVID-19 Image Classification via ResNet," *EAI Endorsed Transactions on Bioengineering and Bioinformatics. 03 2021 - 08 2021 | Volume 1 | Issue 3 | e5.*

J. Bassey, X. Li, and L. Qian (2021). "Device Authentication Codes based on RF Fingerprinting using Deep Learning", ," *EAI Endorsed Transactions on Security and Safety arXiv:2004.08742. Nov. 2021,* Volume 8, Issue 29, e5. doi:10.4108/eai.30-11-2021.172305.

J. Bassey, X. Li, and L. Qian (2021). "A Survey of Complex-Valued Neural Networks," submitted to *The Proceedings of the IEEE, arXiv:2101.12249.*

B. Yang, X. Cao, J. Bassey, X. Li, and L. Qian (2020). "Computation Offloading in Multi-Access Edge Computing Networks: A Multi-Task Learning Approach." *IEEE Transactions on Mobile Computing.*

B. Yang, X. Cao, X. Li, C. Yuen, and L. Qian (2020). "Lessons Learned from Accident of Autonomous Vehicle Testing: An Edge Learning-aided Offloading Framework," *IEEE Wireless Communications Letters.* doi: 10.1109/LWC.2020.2984620.

B. Yang, X. Cao, X. Li, Q. Zhang, and L. Qian (2020). "Mobile Edge Computing based Hierarchical Machine Learning Tasks Distribution for Industrial Internet-of-Things." *IEEE Internet-of-Things Journal*, Vol. 7, No. 3, pp.2169-2180, March 2020.

B. Yang, X. Cao, O. Omotere, X. Li, and L. Qian (2020). "Improving Medium Access Efficiency with Intelligent Spectrum Learning," *IEEE Access.* Vol. 8, pp 94484-94498, *Digital Object Identifier 10.1109/ACCESS.2020.2995398,* May 18, 2020,

S. O. Bamgbose, X. Li, and L. Qian (2020). "Neural Network Based Nonlinear Adaptive Controller Design for a Class of Bilinear System", *IET cognitive computation and systems,* PP. 1-11, DOI: 10.1049/ccs.2019.0015, Vol. 2, Issue 1, Feb. 2020.

X. Dong, S. Chowdhury, L. Qian, X. Li, Y. Guan, J. Yang, and Q. Yu (2019). "Deep learning for named entity recognition on Chinese electronic medical records: combining deep transfer learning with multitask bi-directional lstm rnn," *PLOS ONE*, 14(5):e0216046. doi: 10.1371/journal.pone.0216046, May 2, 2019.

S. O. Bamgbose, X. Li, and L. Qian (2019). "Trajectory tracking control optimization with neural network for autonomous vehicles," *Adv. Sci. Tech. Eng. Syst. J., Special Issue on Recent Advances in Engineering Systems,* DOI: 10.25046/aj040121. **4**(1), page 217-224,Feb. 2019.

J. Bassey, D. Adesina, X. Li, L. Qian, A. Aved, T. Kroecker (2019). "Intrusion Detection for IoT Devices based on RF Fingerprinting using Deep Learning", *The Fourth International Conference on Fog and Mobile Edge Computing (FMEC 2019)*, Rome, Italy.

J. Bassey, X. Li, and L. Qian (2019). "An Experimental Study of Multi-Layer Multi-Valued Neural Network", *The 2nd International Conference on Data Intelligence and Security* (*ICDIS 2019)*, South Padre Island, USA

W. Oduola and X. Li (2018). "Multiscale Tumor Modeling with Drug PK/PD Profile Using Stochastic Hybrid System", *Cancer Informatics,* Vol 17, 1-7, DOI: 10.1177/1176935118790262, July 27 2018.

H. Jafari, X. Li, L. Qian, A. Aved, T. Kroecker (2018). "Efficient Processing of Big Uncertain Data from Multiple Sensors with High Order Multi-Hypothesis: An Evidence Theoretic Approach", *International Journal of Big Data Intelligence,* Vol.5(3), pp.177-190. 2018

W. Oduola, X. Li, C. Duan, L. Qian, and E. Dougherty (2018). "Sequential Therapeutic Response Modeling for Tumor Treatment Using Computational Hybrid Control System Approach". *IEEE Transactions On Biomedical Engineering*, DOI: 10.1109/TBME.2017.2723957, pp 866-874, PMCID: 28692960, Vol. 65, Issue 4, Apr. 2018.

S. Chowdhury, X. Dong, L. Qian, X. Li, Y. Guan, J. Yang, Q. Yu (2018). "A Multitask bi-directional RNN Model for Named Entity Recognition on Electronic Medical Records", *BMC Bioinformatics,* 19 (suppl 17): 499, DOI: 10.1186/s12859-018-2467-9, December 28 2018.

J. Bassey, X. Li, L. Qian, A. Aved, and T. Kroecker (2018). "Efficient Computing of Dempster-Shafer Theoretic Conditionals for Big Hard/Soft Data Fusion", *21st International Conference on Information Fusion (FUSION)*, July 2018, Cambridge, UK.

S. Bamgbose, X. Li, L. Qian (2018). "Neural Network Optimized Controller for Motion and Position Control in Autonomous Systems", *14th IEEE International Conference on Control & Automation (ICCA 2018)*, June, 2018, Alaska, USA.

W. Oduola, X. Li, L. Qian, C. Duan, F. Wu, E. Dougherty (2017). "Time-Based Switching Control of Genetic Regulatory Networks: Towards Sequential Drug Intake for Cancer Therapy", *Cancer*

Informatics. Vol: 16, pp 1-11, DOI: 10.1177/1176935117706888, PMID: 28579741, May 10, 2017.

X. Li., O. Omotere, L. Qian, and E. Dougherty (2017). "Review of Stochastic Hybrid Systems with Applications in Biological Systems Modeling and Analysis", *EURASIP Journal on Bioinformatics and Systems Biology*, 2017:8, **DOI:** 10.1186/s13637-017-0061-5, pp 1-12, Jun. 30, 201
Xiangfang Li, Wasiu Oduola, Lijun Qian, Edward Dougherty (2015). "Integrating Multiscale Modeling with Drug Effects for Cancer Treatment", Cancer Informatics, 2015.

Wasiu Oduola, Xiangfang Li, Lijun Qian, Chang Duan, Fen Wu, Edward Dougherty (2016). "Analysis and Control of Genetic Regulatory Systems with Switched Drug Inputs," IEEE International Conference on Biomedical and Health Informatics, Las Vegas, NV, USA, February 24-27, 2016.

Hossein Jafari, Xiangfang Li, Lijun Qian, Yuanzhu Chen (2015). "Community Based Sensing: A Test Bed for Environment Air Quality Monitoring using Smartphone paired Sensors", *IEEE Sarnoff Symposium,* Newark, NJ, Sep 2015.

X. Li, L. Qian, and E. Dougherty (2014). "Sensitivity Analysis For Drug Effect Study: an NF-kB Pathway Example", *IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS 2014)*, Dec. 2014, Atlanta.

W. Oduola, L. Qian, X. Li, Z. Han (2014). "Power Control for Device-to-Device Communications as an Underlay to Cellular System", in *Proc. of IEEE ICC*, Sydney, Australia.

W. Oduola, L. Qian, X. Li (2014). "Femtocell as a Relay with Application of Physical Layer Network Coding", in *Proc. of IEEE CCNC, Jan* 10-13, Las Vegas, NV, USA.
L. Qian, X. Li, and S. Wei (2013). "Anomaly Spectrum Usage Detection in Multihop Cognitive Radio Networks: A Cross-Layer Approach", *Journal of Communications*, vol. 8, no. 4, pp. 259-266. Doi: 10.12720/jcm.8.4. 259-266.

X. Li, L. Qian, and E. Dougherty (2013). "Identification of Molecularly Targeted Drug Effect Coefficient Using H$_\infty$ Filter", IEEE Global Conference on Signal and Information Processing (GlobalSIP), Austin, USA, Dec. 3-5, 2013

X. Li, L. Qian, and E. Dougherty (2013). "Drug Sensitivity Analysis: A Dosage Study on Cancer Cell Lines", *Symposia on Cancer Research: Genomic Medicine*, MD Anderson Cancer Center, Houston, USA, Oct. 4-5, 2013.
X. Li, L. Qian, M. Bittner, and E. Dougherty (2013). "Drug Effect Study on Proliferation and Survival Pathways on Cell Line-based Platform: a Stochastic Hybrid Systems Approach", *IEEE International Workshop on Genomic Signal Processing and Statistics (GENSIPS 2013)*, accepted, Houston, USA, Nov. 17-19, 2013

L. Qian, X. Li, and S. Wei (2013). "Cross-Layer Detection of Stealthy Jammers in Multihop Cognitive Radio Networks", Invited position paper, *International Conference on Computing, Networking and Communication (ICNC), San Diego, USA. Jan. 28-31, 2013.*

X. Li and E. Dougherty (2012). "Dynamical Modeling of Drug Effects Using Hybrid Systems", *EURASIP Journal on Bioinformatics and Systems Biology*, 2012:19. DOI: 10.1186/1687-4153-2012-19, Dec. 26, 2012.

X. Li, J. Hua, M. Bittner, and E. Dougherty (2012). "Assessing the Efficacy of Molecularly Targeted Agents on Cell Line-based Platforms by Using System Identification", *BMC Genomics*, 13:S11 DOI: 10.1186/1471-2164-13-S6-S11, Oct. 26, 2012.
X. Li, M. Bittner, and E. Dougherty (2012). "A Systems Biology Approach in Therapeutic Response Study for Different Dosing Regimens - a Modeling Study of Drug Effects on Tumor Growth Using Hybrid Systems", *Cancer Informatics, pp. 41-60, 2012:11* PMID:22442626, Feb. 27, 2012.

X. Li, L. Qian, M. Bittner, and E. Dougherty (2011). "Characterization of Drug Efficacy Regions Based on Dosage and Frequency Schedules", *IEEE Transactions On Biomedical Engineering, pp. 488-498*, vol. 58, no. 3, PMID: 21095860, Mar. 2011.

L. Qian, H. Wang and X. Li (2011). "Genetic Regulatory Networks Inference: Combining a genetic programming and H∞ Filtering Approach", *Chapter 7 in Applied Statistics for Network Biology: Methods in Systems Biology*, *pp. 133-153*, Wiley, ISBN: 978-3-527-32750-8, June 2011.

Sample Professional Activities

Senior Member of IEEE since 2018; Member of IEEE since 2009

Member of American Association for Cancer Research (AACR); Member of Women in Cancer Research (WISR)

Panel of NIFA Food and Agriculture Cyberinformatics and Tools program (FACT), Feb. 2023; June 2020

NSF Panel Reviewer for "Computer and Information Science and Engineering (CISE) Cyber-Physical Systems Medical Panel", July 2015; NSF Proposal reviewer, March 2020
Associate Editor for "Eurasip Journal on Bioinformatics and Systems Biology"

Review Editor in "Bioinformatics and Computational Biology", Frontiers Community

Served in Undergraduate Council (UGC) of PVAMU (2019 –2022) (University)

2017 Outstanding Researcher of the Year, Roy G. Perry College of Engineering, PVAMU

Current Grant Support

Targeted Infusion Project: Infusing 5G and IoT Learning and Practice into Electrical and Computer Engineering Curriculum Principal Investigator (PI) with Xishuang Dong, Lijun Qian, and Kelvin Kirby; National Science Foundation (NSF) 2022 – 2025

Quantum-aware Complex-valued Neural Networks Design and Implementation:Integrated Research, Curriculum Development, and Outreach *Co-Principal Investigator; IBM-HBCU Quantum Center; 2022-2023*

Accelerating Credentials of Purpose and Value Grant Program / Texas A&M System Consortium; *Co-Principal Investigator; THECB; 2022*

Advanced Deep Learning for Object Detection in Overhead Imagery; Co-Principal Investigator*; AFRL; 2022-2024*

Computational Biology and Bioengineering Research Lab at Prairie View A&M University*; Co-Principal Investigator; Texas A&M University System Chancellor's Research Initiative (CRI), 2015 – current*

*C̲enter of E̲xcellence in R̲esearch and E̲ducation for Big Military D̲ata I̲nt̲elligence (**CREDIT***); *Co- Principal Investigator; Department of Defense, 2015 – 2021*

HBCU-RISE: Bridging Quantitative Research with Biomedical Science: Enhancing Computational Systems Biology Research at PVAMU; Co-Principal Investigator *U.S.; National Science Foundation (NSF); 2017 - 2022*