

XUHUI (TRACY) CHEN

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College of Aeronautics and Engineering
Kent State University, Kent, Ohio 44240

RESEARCH INTERESTS

Cybersecurity (security and privacy in distributed machine learning, Blockchain technology), Artificial intelligence, with applications in the cyber-physical systems (UAV, Robot, power systems) and bioinformatics.

EDUCATION

- **Ph.D.** in Computer Engineering, GPA: 4.0/4.0 01/2016 - 08/2019
Case Western Reserve University, Cleveland, OH, USA
Advisor: Prof. Pan Li
- **M.S.** in Electrical and Computer Engineering, GPA: 4.0/4.0 08/2013 - 12/2015
Mississippi State University, Mississippi State, MS, USA
Advisor: Prof. Pan Li
- **B.S.** in Information Engineering, GPA: 87/100 09/2008 - 07/2012
Xidian University, Xi'an, Shaanxi, China
Advisor: Prof. Baoming Bai

RESEARCH EXPERIENCES

- **Assistant Professor**, 08/2019 - present
College of Aeronautics and Engineering, Kent State University
- **Research Assistant**, 01/2016 - 08/2019
Department of Electrical Engineering and Computer Science, Case Western Reserve University
- **Research Assistant**, 08/2013 - 12/2015
Department of Electrical and Computer Engineering, Mississippi State University

TEACHING EXPERIENCES

- **Instructor**, Kent State University
TECH 60001 Quantitative Methods in Technology Fall, 2019
- **Guest Lecturer**, Case Western Reserve University
ECE 414 Wireless Communication Fall, 2017 and Fall, 2018
- **Teaching Assistant**, Case Western Reserve University
EECS 340 Algorithms Spring, 2019
EECS 414 Wireless Communication Fall, 2017
EECS 313 Signal Processing Spring, 2017
EECS 315 Digital Systems Design Spring, 2016

PUBLICATIONS

Conference Papers

- **Xuhui Chen**, Xufei Wang, and Kun Yang, “*Asynchronous Blockchain-based Privacy-preserving Training Framework for Disease Diagnosis*,” The First Workshop on Security and Privacy on Blockchain, Los Angeles, December 2019.
- Kun Yang, **Xuhui Chen**, and Pan Li, “*Data Streaming Analysis Framework for Through-time 3D Free-breathing Liver DCE-MRI*,” IEEE International Conference on Big Data (IEEE BigData’19), Los Angeles, December 2019.
- Jinlong Ji, **Xuhui Chen**, Qianlong Wang, Lixing Yu, and Pan Li, “*Learning to Learn Gradient Aggregation by Gradient Descent*,” the 28th International Joint Conference on Artificial Intelligence (IJCAI’19), Macao, China, August 2019. (Acceptance Ratio = $850/4752 = 17.9\%$)
- **Xuhui Chen**, Jinlong Ji, Changqing Luo, Weixian Liao, and Pan Li, “*When Machine Learning Meets Blockchain: A Decentralized, Privacy-preserving, and Secure Design*,” IEEE International Conference on Big Data (BigData’18), Seattle, WA, December, 2018. (Acceptance Ratio = $99/518 = 19.1\%$)
- Weixian Liao, Yifan Guo, **Xuhui Chen**, and Pan Li, “*A Unified Unsupervised Gaussian Mixture Variational Autoencoder for High Dimensional Outlier Detection*,” IEEE International Conference on Big Data (BigData’18), Seattle, WA, December, 2018. (Acceptance Ratio = $99/518 = 19.1\%$)
- **Xuhui Chen**, Jinlong Ji, Lixing Yu, Changqing Luo, and Pan Li, “*SecureNets: Secure Inference of Deep Neural Networks on an Untrusted Cloud*,” the 10th Asian Conference on Machine Learning (ACML’18), Beijing, China, November, 2018. (Acceptance Ratio = $57/230 = 24.8\%$)
- **Xuhui Chen**, Jinlong Ji, Tianxi Ji, and Pan Li, “*Cost-Sensitive Deep Active Learning for Epileptic Seizure Detection*,” the 9th ACM Conference on Bioinformatics, Computational Biology, and Health Informatics (BCB’18), Washington, DC, August, 2018.
- Jinlong Ji, Changqing Luo, **Xuhui Chen**, Lixing Yu, and Pan Li, “*Cross-Domain Sentiment Classification via A Bifurcation-LSTM*,” the 22nd Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD’18), June, 2018. (Acceptance Ratio = $59 \text{ (long papers)}/590 = 10\%$, Best Application Award)
- Jinlong Ji, **Xuhui Chen**, Changqing Luo, and Pan Li, “*A Deep Multi-task Learning Approach for ECG Data Analysis*,” IEEE Conference on Biomedical and Health Informatics (BHI’18), Las Vegas, NV, March, 2018.
- **Xuhui Chen**, Jinlong Ji, Kenneth A. Loparo, and Pan Li, “*Real-time Personalized Cardiac Arrhythmia Detection and Diagnosis: A Cloud Computing Architecture*,” IEEE Conference on Biomedical and Health Informatics (BHI’17), Orlando, FL, February, 2017.
- Sergio Salinas, Changqing Luo, **Xuhui Chen**, and Pan Li, “*Efficient Secure Outsourcing of Large-scale Linear Systems of Equations*,” IEEE International Conference on Computer Communications (INFOCOM’15), Hong Kong, China, April, 2015. (Acceptance ratio = $316/1640 = 19.3\%$)

Journal Papers

- Changqing Luo, Jinlong Ji, **Xuhui Chen**, Ming Li, Lawrence T. Yang, and Pan Li, “*Parallel Secure Outsourcing of Large-scale Nonlinearly Constrained Nonlinear Programming Problems*,” to appear in IEEE Transactions on Big Data.
- Changqing Luo, Jinlong Ji, Qianlong Wang, **Xuhui Chen**, and Pan Li, “*Channel State Information Prediction in 5G Wireless Communications: A Deep Learning Approach*,” to appear in IEEE Transactions on Network Science and Engineering.
- Sergio Salinas, Changqing Luo, **Xuhui Chen**, Weixian Liao, and Pan Li, “*Efficient Secure Outsourcing of Large-scale Sparse Linear Systems of Equations*,” IEEE Transactions on Big Data, Vol. 4, No. 1, pp. 26-39, January-March 2018.
- Ming Li, Weixian Liao, **Xuhui Chen**, Jinyuan Sun, Xiaoxia Huang, and Pan Li, “*Economic-Robust Transmission Opportunity Auction for D2D Communications in Cognitive Mesh Assisted Cellular Networks*,” IEEE Transactions on Mobile Computing, Vol. 17, No. 8, pp. 1806-1819, August 2018.
- Sergio Salinas, **Xuhui Chen**, Jinlong Ji, and Pan Li, “*A Tutorial on Secure Outsourcing of Large-scale Computations for Big Data*,” IEEE Access, 2016.

HONORS AND AWARDS

- Bridge funding scholarship, Case Western Reserve University 2018
- Best Application Paper Award, PAKDD’18 2018
- 2nd Place in IEEE Big Data Analytics Competition at IEEE BHI 2017
- Certificate of the CWRU Future Faculty Preparation 2017
- National Scholarship, the Ministry of Education of P. R. China 2011
- Special Scholarship (1 out of 161), Xidian University 2011

PROFESSIONAL ACTIVITIES

- **Conference TPC member:**
International Conference on Computing, Networking and Communications: Wireless Networks (ICNC’19’20)
The 14th IEEE International Conference on Green Computing and Communications (GreenCom’19)
The First Workshop on Security and Privacy on Blockchain for Big Data Applications in conjunction with 2019 IEEE International Conference on Big Data (SPB) 2019
- **Reviewer for journals:**
IEEE Wireless Communications Letters
IEEE Journal of Journal of Biomedical and Health Informatics
IEEE Transactions on Big Data
IEEE Journal on Selected Areas in Communications
IEEE Transactions on Vehicular Technology
ELSEVIER Computers & Security
- **Reviewer for conferences:**
ICNC’19’20, MobiQuitous’19, GreenCom’19, ICIT’15