

# KAN YANG

Associate Professor  
Director of CryptoSec Lab  
Founder and Director of UofM CyberCorps SFS Program  
Associate Director of Center for Information Assurance

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<https://kan-yang.github.io/>

## RESEARCH INTERESTS

- AI Security
- Data Security and Privacy
- Identity Management and Blockchain
- Network Security and Trust
- Applied Cryptography

## RESEARCH IMPACT

- World's Top 2% Scientists, [Stanford University Database](#), Career and Single Year (2019 – 2024)
- [Google Scholar Citations](#): 9055, h-index: 38, i10-index: 55 (updated on Sept 2024)
- [ACM AsiaCCS Best Paper Award, 2024](#)
- [IEEE Internet of Things Journal Best Paper Award Runner-up, 2021](#)
- [Notable Paper in Computing Reviews Best of 2012](#)

## EDUCATION

City University of Hong Kong, Hong Kong 2009 -2013  
Ph.D. in Computer Science, Advisor: Prof. Xiaohua Jia  
Thesis Topic: Security for Cloud Storage Systems (**Outstanding Research Thesis Award**)  
University of Science and Technology of China, Anhui, China 2004 -2008  
B.Eng. in Information Security

## PROFESSIONAL EMPLOYMENT

The University of Memphis, TN, USA 2017 - present  
Associate Professor (since 2024), Assistant Professor (2017-2024)  
University of Waterloo, Ontario, Canada 2014 -2016  
Postdoctoral Fellow, Advisor: Prof. Xuemin (Sherman) Shen

## GRANTS

External (**\$4.3M**):

[PI] CyberCorps Scholarship for Service: Developing the Cybersecurity Workforce in West Tennessee, Mississippi, and Arkansas, NSF DGE 2146427, \$3,806,815, 2/1/2022 - 1/31/2027.

[PI] Designing Machine Learning-based Solutions for APT Detection, FedEx Corporate Services Inc., \$397,084, 8/1/2022 - 7/31/2025.

[Co-PI] GenCyber 2022, National Security Agency (NSA), \$99,764, 5/25/2022 - 3/31/2023.

Internal:

[PI] Design Machine Learning Model for RDP Anomaly Detection, FedEx Institute of Technology Frontiers Program, \$10,000, 6/1/2022 - 8/31/2022.

[PI] Towards Secure and Robust Block Validation for Blockchain, ASPIRED Integrate Grant Program, UofM, \$5,000, 7/1/2021 - 6/30/2022.

[PI] PKChain: Decentralized Public-Key Management System based on Blockchain Technology, FedEx Institute of Technology Development Grant - CAST, \$15,000, 7/1/2018 - 12/31/2019.

## **TEACHING EXPERIENCE**

The University of Memphis, TN, USA 2017.01- present  
COMP 3825 Networking and Information Assurance (Spring 19-22, Fall 20-23)  
COMP 4/6420 Network and Mobile Security (Fall 17-2024)  
COMP 7/8120 Cryptography and Data Security (Spring 17-2024)  
COMP 7/8998 Seminar: Security and Privacy in Cloud Computing and IoT (Fall 19)  
Program Coordinator of B.S. degree with a Cybersecurity Concentration (17-present)  
Program Coordinator of Graduate Certificate on Cybersecurity and Information Assurance (17-present)

## **ACADEMIC ACTIVITIES**

### **Professional Services**

- Associate Editor of IEEE Internet of Things Journal (2024 – present)
- Travel Grant Chair for the 43rd IEEE International Conference on Distributed Computing Systems, 2023
- Leading Guest Editor on IEEE Internet of Things Journal Special Issue on “Recent Advances of Security, Privacy, and Trust in Mobile Crowdsourcing”, 2023
- Chair of Special Session on Computing and Applications for Cyber Internet of Things (Cyber-IoT) in IEEE Cyber Science and Technology Congress (2017, 2022, 2024)
- Serve on NSF panel (2021, 2023)
- Organized the Annual Mid-South Cybersecurity Summit at the University of Memphis (2017, 2018, 2022)
- Co-organized the Annual Cybersecurity Summer Camp (2019, 2021, 2022)
- Leading NSA CAE-CD and CAE-R redesignation at University of Memphis

### **TPC Member**

- ACM ASIA Conference on Computer and Communications Security (AsiaCCS'24-25)
- IEEE International Conference on Communications (ICC'17-23)
- IEEE International Conference on Blockchain (Blockchain'18-22)
- IEEE Global Communications Conference (GLOBECOM'16-23)
- IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS'18-21)
- The 15th International Conference on Green, Pervasive and Cloud Computing (GPC'20)
- IEEE International Conference on Wireless Communications and Signal Processing (WCSP'17-18)
- IEEE International Conference on Computing, Networking and Communications (ICNC'16-17)
- IEEE International Conference on Computer Communications and Networks (ICCCN'15-17, 24)
- IEEE International Performance Computing and Communications Conference (IPCCC'15-16, 21)

### **Journal Reviewer** (Peer Review Data from [Web of Science](#))

- |   |  |
|---|--|
| ▪ IEEE Internet of Things Journal                   | ▪ IEEE/ACM Trans. on Networking                  |
| ▪ IEEE Trans. on Dependable and Secure Computing    | ▪ IEEE Communications Magazine                   |
| ▪ IEEE Trans. on Information Forensics and Security | ▪ IEEE Trans. on Industrial Informatics          |
| ▪ IEEE Trans. on Services Computing                 | ▪ IEEE Trans. on Network Science and Engineering |
| ▪ IEEE Trans. on Vehicular Technology               | ▪ ACM Trans. on Privacy and Security             |
| ▪ IEEE Trans. on Cloud Computing                    | ▪ Journal of Medical Systems                     |
| ▪ IEEE Trans. on Parallel and Distributed Systems   | ▪ IEEE Trans. on Embedded Computing Systems      |
| ▪ IEEE Trans. on Knowledge and Data Engineering     | ▪ IEEE Wireless Communications                   |
| ▪ IEEE Trans. on Mobile Computing                   |  |

## **PATENTS**

US11582024 “Blockchain-based Decentralized Public Key Management System” by **K. Yang** and L. Wang, Feb 2023

## **PUBLICATIONS**

### **Preprint**

- S. C. Ebron and **K. Yang**, "FedTruth: Byzantine-Robust and Backdoor-Resilient Federated Learning Framework", <https://arxiv.org/pdf/2311.10248.pdf>.
- J. Mosakheil and **K. Yang**, "Decentralized Compromise-Tolerant Public Key Management Ecosystem with Threshold Validation". Cryptology ePrint Archive, <https://eprint.iacr.org/2023/1791>.

### **2024**

- [C31] S. Li, Y. Zhang, Y. Song, F. Wu, F. Lyu, **K. Yang**, and Q. Tang, "Privacy-Preserving Cross-Facility Early Warning for Unknown Epidemics". To appear on *the 25<sup>th</sup> Privacy Enhancing Technologies Symposium (PETS'25)*, Washington DC, 2025.
- [C30] M. Zhang, H. Zhao, S. C. Ebron and **K. Yang**, "Towards Fair, Robust and Efficient Client Contribution Evaluation in Federated Learning". To appear on *Proc. of IEEE Global Communications Conference (GLOBECOM'24)*, Cape Town, South Africa.
- [C29] M. Zhang, H. Zhao, S.C. Ebron, R. Xie and **K. Yang**, "Ensuring Fairness in Federated Learning Services: Innovative Approaches to Client Selection, Scheduling, and Rewards". In *Proc. of the 44th IEEE International Conference on Distributed Computing Systems (ICDCS'24, acceptance rate: 21.9%)*, 23 July - 26 July, Jersey City, New Jersey, USA
- [C28] Y. Wang, Y. Zhang, Y. Song, N. Cheng and **K. Yang**. "PPoD: Practical Proofs of Dealership for Authorized Data Trading". In *Proc. of IEEE International Conference on Communications (ICC)*, Denver, June 2024.
- [C27] X. He, Y. Zhang, Y. Song, N. Cheng and **K. Yang**. "STAGE: Secure and Efficient Data Delivery for Exchange-Assisted Data Marketplaces". In *Proc. of IEEE International Conference on Communications (ICC)*, Denver, CO, USA, June 2024.
- [C26] J. Mosakheil and **K. Yang**. "SilentProof: Anonymous Authentication with Blockchain-backed Offloading". In *Proc. of the 19th ACM ASIA Conference on Computer and Communications Security (AsiaCCS'24, acceptance rate: 21%, Best Paper Award)*, 2024.
- [J52] S. Li, Y. Zhang, Y. Song, H. Liu, N Cheng, D. Tao, H Li and **K. Yang**, "Beyond Security: Achieving Fairness in Mailmen-Assisted Timed Data Delivery". *IEEE Transactions on Information Forensics and Security*, vol. 19, pp. 6425 – 6440, 2024.
- [J51] Y. Bi, K. Fan, Z. Zeng, **K. Yang**, H. Li, Y. Yang, "Seamless group handover authentication protocol for vehicle networks: Services continuity". *Computer Networks*, vol. 252, 2024
- [J50] G. Wei, K. Fan, K. Zhang, H. Wang, Y. Wang, **K. Yang**, H. Li and Y. Yang. "Lower rounds lattice-based anonymous AKA under the seCK model for the IoT". *Peer-to-Peer Networking and Applications*, <https://doi.org/10.1007/s12083-024-01676-0>, 2024.
- [J49] S. Li, Y. Zhang, Y. Song, N. Cheng, **K. Yang** and H. Li. "Blockchain-Based Portable Authenticated Data Transmission for Mobile Edge Computing: A Universally Composable Secure Solution". *IEEE Transactions on Computers*, vol. 73, no. 4, pp. 1114-1125, April 2024.
- [J48] **K. Yang**, R. Lu, M. Mahmoud and X. Jia. "Guest Editorial Special Issue on Recent Advances of Security, Privacy, and Trust in Mobile Crowdsourcing", *IEEE Internet of Things Journal*, vol. 11, no. 2, pp. 1784-1787, Jan. 15, 2024, doi: 10.1109/JIOT.2023.3339395.
- [J47] K. Fan, W. Li, Y. Bai, Y. Yang, **K. Yang** and H. Li. "EIV-BT-ABE: Efficient Attribute-Based Encryption With Black-Box Traceability Based On Encrypted Identity Vector". *IEEE Internet of Things Journal*, vol. 11, no. 9, pp. 15229-15240, 2024.
- [J46] W. Li, K. Fan, **K. Yang**, Y. Yang and H. Li. "PBFL: Privacy-preserving and Byzantine-robust Federated Learning Empowered Industry 4.0". *IEEE Internet of Things Journal*, vol. 11, no. 4, pp. 7128-7140, 2024.

## 2023

- [J45] Z. Liu, K. Zheng, L. Hou, H. Yang and **K. Yang**. "A Novel Blockchain-Assisted Aggregation Scheme for Federated Learning in IoT Networks". *IEEE Internet of Things Journal*, vol. 10, no. 9, pp. 17544-17556, 2023.
- [J44] K. Fan, Z. Shi, Y. Yang, L. Bai, Y. Yang, **K. Yang** and H. Li. "Blockchain-based cloud-edge clock calibration in IoT". *Peer-to-Peer Networking and Applications*. vol 16, pp:1432–1444, 2023.
- [J43] **K. Yang**, J. Shu and R. Xie. "Efficient and Provably Secure Data Selective Sharing and Acquisition in Cloud-based Systems". *IEEE Trans. on Information Forensics and Security*, vol. 18, pp. 71-84, 2023.
- [J42] J. Shu, T. Yang, X. Liao, F. Chen, Y. Xiao, **K. Yang** and X. Jia. "Clustered Federated Multi-Task Learning on Non-IID Data with Enhanced Privacy," *IEEE Internet of Things Journal*, vol.10, no.4, pp: 3453-3467, 2023.

## 2022

- [J41] X. Wang, K. Fan, **K. Yang**, X. Cheng, Q. Dong, H. Li and Y. Yang, "A new RFID ultra-lightweight authentication protocol for medical privacy protection in smart living". *Computer Communications*, Elsevier, Feb. 2022.
- [J40] A. Yang, J. Weng, **K. Yang**, C. Huang and X. Shen, "Delegating Authentication to Edge: A Decentralized Authentication Architecture for Vehicular Networks". *IEEE Trans. on Intelligent Transportation Systems*, vol. 23, no. 2, pp: 1284-1298, 2022.
- [J39] L. Yan, **K. Yang** and S. Yang, "Reputation-based Truth Discovery with Long-term Quality of Source in Internet of Things". *IEEE Internet of Things Journal*, vol. 9, no. 7, April 2022.

## 2021

- [C25] L. Yan, **K. Yang**, S. Yang and Z. Han, "A Trust-aware Fog Offloading Game with Long-term Trustworthiness of Users". In *Proc. of 2021 IEEE Global Communications Conference (Globecom'21)*, Madrid, Spain, 7-11 December 2021.
- [C24] **K. Yang** and S. Dutta. "Secure and Efficient Task Matching with Multi-keyword in Multi-requester and Multi-worker Crowdsourcing". In *Proc. of IEEE/ACM International Symposium on Quality of Service (IWQoS'21)*, 25-28 June 2021, Virtual Conference.
- [J38] B. Zhao, K. Fan, **K. Yang**, Z. Wang, H. Li and Y. Yang, "Anonymous and Privacy-preserving Federated Learning with Industrial Big Data," *IEEE Trans. on Industrial Informatics*, vol. 17, no. 9, pp. 6314-6323, 2021.
- [J37] H. Yang, R. Su, P. Huang, Y. Bai, K. Fan, **K. Yang**, H. Li, and Y. Yang, "PMAB: A Public Mutual Audit Blockchain for Outsourced Data in Cloud Storage", *Secure Communication Networks*, pp. 1-11, 2021
- [J36] Y. Zhang, C. Xu, H. Li, **K. Yang**, N. Cheng, and X. Shen, "PROTECT: Efficient Password-based Threshold Single-sign-on Authentication for Mobile Users against Perpetual Leakage". *IEEE Trans. on Mobile Computing*, vol. 20, no. 6, pp. 2297-2312, 2021.
- [J35] J. Shu, **K. Yang**, X. Jia, X. Liu, C. Wang, and D. Zheng, "Proxy-Free Privacy-Preserving Task Matching with Efficient Revocation in Crowdsourcing". *IEEE Trans. on Dependable and Secure Computing*, vol.18, no.1, pp. 117-130, 2021.
- [J34] J. Shu, X. Jia, **K. Yang**, and H. Wang, "Privacy-Preserving Task Recommendation Services for Crowdsourcing". *IEEE Trans. on Services Computing*, vol. 14, no. 1, pp. 235-247, 2021.

## 2020

- [C23] G. Xu, H. Li, H. Ren, J. Sun, S. Xu, J. Ning, H. Yang, **K. Yang** and R. Deng. "Secure and Verifiable Inference in Deep Neural Networks". In *Proc. of 36th Annual Computer Security Applications Conference (ACSAC'20)*, pp. 784-797, Austin, TX, 7-11 December 2020.
- [J33] G. Xu, H. Li, S. Liu, **K. Yang** and X. Lin, "VerifyNet: Secure and Verifiable Federated Learning". *IEEE Trans. on Information Forensics and Security*, vol. 15, pp 911-926, 2020. **(ESI Highly Cited Paper)**
- [J32] Z. Su, Q. Xu, Q. Zhao, J. Song, W. Shen, Y. Wang, and **K. Yang**, "Experience Blocking Ratio Based Game Theoretic Approach for Spectrum Sharing in Heterogeneous Networks". *IEEE Trans. on Network Science and*

*Engineering*, vol. 7, no. 1, pp. 343-355, 2020.

[C22] K. Fan, B. Zhao, W. You, **K. Yang**, Z. Wang, and H. Li. "A Weight-based k-prototypes Algorithm for Anomaly Detection in Smart Grid". In *Proc. of IEEE International Conference on Communications (ICC'20)*, Dublin, Ireland, 7-11 June 2020.

## 2019

[J31] G. Xu, H. Li, H. Ren, **K. Yang** and R. H. Deng, "Data Security Issues in Deep Learning: Attacks, Countermeasures, and Opportunities". *IEEE Communications Magazine*, vol. 57, no. 11, pp. 116-122, Nov 2019.

[J30] K. Fan, S. Wang, Y. Ren, **K. Yang**, Z. Yan, H. Li, and Y. Yang, "Blockchain-based Secure Time Protection Scheme in IoT". *IEEE Internet of Things Journal*, vol. 6, no. 3, pp. 4671-4679, June 2019.

[J29] G. Xu, H. Li, Y. Dai, **K. Yang** and X. Lin, "Enabling Efficient and Geometric Range Query with Access Control Over Encrypted Spatial Data". *IEEE Trans. on Information Forensics and Security*, vol. 14, no. 4, pp. 870-885, April 2019. **(ESI Highly Cited Paper)**

[J28] Z. Yang, **K. Yang**, L. Lei, K. Zheng and V. C. M. Leung, "Blockchain-based Decentralized Trust Management in Vehicular Networks". *IEEE Internet of Things Journal*, vol. 6, no. 2, pp. 1495-1505, April 2019. **(Best Paper Runner-up, ESI Highly Cited Paper, Hot Cited Paper)**

[J27] J. Shu, X. Liu, **K. Yang**, Y. Zhang, X. Jia, R. Deng, "SybSub: Privacy-Preserving Expressive Task Subscription with Sybil Detection in Crowdsourcing". *IEEE Internet Things Journal*, vol. 6, pp. 3003-3013, 2019.

## 2018

[J26] Y. Zhang, R. H. Deng, J. Shu, **K. Yang**, and D. Zheng, "TKSE: Trustworthy Keyword Search Over Encrypted Data With Two-Side Verifiability via Blockchain". *IEEE Access*, vol. 6, pp. 31077 - 31087, 2018.

[J25] J. Shu, X. Liu, X. Jia, **K. Yang**, and R. H. Deng, "Anonymous Privacy-Preserving Task Matching in Crowdsourcing". *IEEE Internet of Things Journal*, vol. 5, no. 4, pp. 3068-3078, August 2018.

[J24] Y. Zhang, C. Xu, H. Li, **K. Yang**, J. Zhou and X. Lin, "HealthDep: An Efficient and Secure Deduplication Scheme for Cloud-Assisted eHealth Systems". *IEEE Trans. on Industrial Informatics*, vol. 14, no. 9, pp. 4101-4112, Sept. 2018.

[J23] H. Ren, H. Li, Y. Dai, **K. Yang**, and X. Lin, "Querying in Internet of Things with Privacy Preserving: Challenges, Solutions and Opportunities". *IEEE Network*, vol. 32, no. 6, pp. 144-151, 2018.

[J22] K. Zhang, X. Liang, J. Ni, **K. Yang**, and X. Shen. "Exploiting Social Network to Enhance Human-to-Human Infection Analysis Without Privacy Leakage". *IEEE Trans. on Dependable and Secure Computing*, vol. 15, no. 4, pp. 607-620, 2018.

[C21] J. Shu, X. Liu, **K. Yang**, Y. Zhang, X. Jia, and R. H. Deng. "SybMatch: Sybil Detection for Privacy-Preserving Task Matching in Crowdsourcing". In *Proc. of IEEE Global Telecommunications Conference (GLOBECOM'18)*, Abu Dhabi, United Arab Emirates, December 9-13, 2018.

[C20] **K. Yang**, J. Sunny, and L. Wang. "Blockchain-based Decentralized Public Key Management for Named-Data Networks (Invited Paper)". In *Proc. of The IEEE 27th International Conference on Computer Communications and Networks (ICCCN'18)*, Hangzhou, China, July 30 – August 2, 2018.

## 2017

[J21] P. Yang, N. Zhang, S. Zhang, **K. Yang**, L. Yu, and X. Shen. "Identifying the Most Valuable Workers in Fog-Assisted Spatial Crowdsourcing". *IEEE Internet of Things Journal*, vol. 4, no. 5, pp. 1193-1203, 2017.

[J20] Q. Xu, Z. Su, and **K. Yang**. "Optimal Control Theory Based Epidemic Information Spreading Scheme for Mobile Social Users with Energy Constraint". *IEEE Access*, vol. 5, pp. 14107-14118, 2017.

[J19] G. Xu, H. Li, C. Tan, D. Liu, Y. Dai and **K. Yang**. "Achieving efficient and privacy-preserving truth discovery in crowd sensing systems". *Computers & Security*, vol. 69, pp. 114-126, 2017.

[J18] **K. Yang**, K. Zhang, X. Jia, A. M. Hasan, and X. Shen. "Privacy-Preserving Attribute-Keyword Based

Publish-Subscribe Service on Cloud Platforms". *Information Sciences*, vol. 387, pp. 116–131, 2017.

[J17] K. Zhang, J. Ni, **K. Yang**, X. Liang, and X. Shen. "Security and Privacy in Smart City Applications: Challenges and Solutions". *IEEE Communications Magazine*, vol. 55, no. 1, pp. 122-129, 2017. (ESI Highly Cited Paper)

[J16] X. Jin, N. Zhang, **K. Yang**, X. Shen, Z. Xu, C. Zhang, and Z. Jin. "PN Ranging Based on Noncommensurate Sampling: Zero-bias Mitigation Methods". *IEEE Trans. on Aerospace and Electronic Systems*, vol. 53, no. 2, pp. 926-940, 2017.

[J15] **K. Yang**, Q. Han, H. Li, K. Zheng, Z. Su and X. Shen. "An Efficient and Fine-grained Big Data Access Control Scheme with Privacy-preserving Policy". *IEEE Internet of Things Journal*, vol. 4, no. 2, pp. 536-571, 2017.

[C19] Z. Yang, K. Zheng, **K. Yang** and V. C.M. Leung. "A Blockchain-based Reputation System for Data Credibility Assessment in Vehicular Networks". In *Proc. of IEEE PIMRC 2017 Special Session SP-05 on "5G Wireless Technologies for V2X Communications"*, Montreal, QC, Canada, October 8-13, 2017.

[C18] G. Xu, Y. Ren, H. Li, D. Liu, Y. Dai and **K. Yang**. "CryptMDB: A Practical Encrypted MongoDB over Big Data". In *Proc. of International Conference on Communications (ICC'17)*, Paris, France, May 2017.

[C17] Q. Xu, Z. Su, Q. Zhao, J. Song, W. Shen, Y. Wang and **K. Yang**. "QoE Loss Probability Based Game-Theoretic Approach for Spectrum Sharing in Heterogeneous Networks". In *Proc. of International Conference on Communications (ICC'17)*, Paris, France, May 2017.

## 2016

[J14] J. Ren, Y. Zhang, Q. Ye, **K. Yang**, K. Zhang, and X. Shen. "Exploiting Secure Collaborative Spectrum Sensing for Cognitive Radio Sensor Networks". *IEEE Trans. on Wireless Communications*, vol. 15, no. 10, 6813-6827, 2016.

[J13] L. Lei, Y. Kuang, **K. Yang**, J. Qiao, X. Shen and Z. Zhong. "Optimal Reliability in Energy Harvesting Industrial Wireless Sensor Networks". *IEEE Trans. on Wireless Communications*, vol. 15, no. 8, pp.5399-5413, 2016.

[J12] **K. Yang**, Z. Liu, X. Jia and X. Shen. "Time-domain Attribute-based Access Control for Cloud-based Video Content Sharing: A Cryptographic Approach". *IEEE Trans. on Multimedia*, vol. 18, no. 5, pp. 940-950, 2016.

[J11] K. Zheng, Z. Yang, K. Zhang, P. Chatzimisios, W. Xiang and **K. Yang**. "Big Data Driven Optimization for Mobile Networks towards 5G". *IEEE Network*, vol. 30, no. 1, pp. 44-51, 2016. (ESI Highly Cited Paper)

[J10] B. Zhang, X. Jia, **K. Yang** and R. Xie. "Design of Analytical Model and Algorithm for Optimal Roadside AP Placement in VANETs". *IEEE Trans. on Vehicular Technology*, vol. 65, no. 9, pp.7708-7718.

[B2] **K. Yang**, X. Jia and X. Shen. "Privacy-preserving Data Access Control in the Smart Grid". *Cyber Security for Industrial Control Systems: from the viewpoint of close-loop*. Peng Cheng, Heng Zhang and Jiming Chen (Eds.), CRC, 2016.

## 2015

[J9] **K. Yang**, K. Zhang, J. Ren and X. Shen. "Security and Privacy in Mobile Crowdsourcing Networks: Challenges and Opportunities". *IEEE Communications Magazine*. Vol 53, Issue 8, pp. 75-81, 2015.

[J8] K. Zhang, **K. Yang**, X. Liang, Z. Su, X. Shen and H. H. Luo. "Security and Privacy for Mobile Healthcare Networks: From Quality-of-Service Perspective". *IEEE Wireless Communications*. Vol. 22, Issue 4, pp. 104-112, 2015.

[J7] **K. Yang**, X. Jia and K. Ren. "Secure and Verifiable Policy Update Outsourcing for Big Data Access Control in the Cloud". *IEEE Trans. on Parallel and Distributed Systems*, vol. 26, no. 12, pp. 3461-3470, 2015.

[J6] J. Wang, C. Huang, **K. Yang**, J. Wang, X. Wang and X. Chen. "MAVP-FE: Multi-authority vector policy functional encryption with efficient encryption and decryption". *China Communications*, vol. 12, no. 6, pp. 126-140, 2015.

[C16] Z. Su, Q. Xu, K. Zhang, **K. Yang** and X. Shen. "Dynamic Bandwidth Allocation in Mobile Social Networks with Multiple Homing Access". In *Proc. of International Conference on Wireless Communications & Signal Processing (WCSP'15)*, Nanjing Jiangsu, China, Oct. 2015.

[C15] K. He, C. Huang, **K. Yang** and J. Shi. "Identity-Preserving Public Auditing for Shared Cloud Data". In *Proc. of the 23rd IEEE International Symposium on Quality of Service (IWQoS'15)*, pp. 159-164, Portland, OR, USA, June 2015.

[C14] K. Zhang, X. Liang, R. Ru, **K. Yang** and X. Shen. "Exploiting Mobile Social Behaviors for Sybil Detection". In *Proc. of the 34th IEEE International Conference on Computer Communications (INFOCOM'15)*, pp. 271-279, Hong Kong, April 2015.

[C13] D. Wang, X. Jia, C. Wang, **K. Yang**, S. Fu and M. Xu. "Generalized Pattern Matching String Search on Encrypted Data in Cloud Systems". In *Proc. of the 34th IEEE International Conference on Computer Communications (INFOCOM'15)*, pp. 2101-2109, Hong Kong, April 2015.

## 2014

[B1] **K. Yang** and X. Jia. "Security for Cloud Storage Systems". Springer Briefs in Computer Science, ISBN 978-1-4614-7872-0, pp. i-xi, 1-83, 2013. (recommended in ACM Computing Reviews in 2014)

[J5] **K. Yang** and X. Jia. "Expressive, Efficient and Revocable Data Access Control for Multi-Authority Cloud Storage". *IEEE Trans. on Parallel and Distributed Systems*, vol. 25, no. 7, pp. 1735-1744, 2014.

[C12] **K. Yang**, X. Jia, K. Ren, R. Xie and L. Huang. "Enabling Efficient Access Control with Dynamic Policy Updating for Big Data in the Cloud". In *Proc. of the 33rd IEEE International Conference on Computer Communications (INFOCOM'14)*, pp. 2013-2021, Toronto, Canada, 2014.

## 2013

[J4] **K. Yang**, X. Jia et al. "DAC-MACS: Effective Data Access Control for Multiauthority Cloud Storage Systems". *IEEE Trans. on Information Forensics and Security*, vol. 8, no. 11, pp 1790-1801, 2013.

[J3] **K. Yang** and X. Jia. "An Efficient and Secure Dynamic Auditing Protocol for Data Storage in Cloud Computing". *IEEE Trans. on Parallel and Distributed Systems*, vol. 24, no. 9, pp 1717-1726, September 2013. (ESI Highly Cited Paper)

[C11] **K. Yang**, X. Jia, K. Ren and B. Zhang. "DAC-MACS: Effective Data Access Control for Multi-Authority Cloud Storage Systems". In *Proc. of the 32nd IEEE International Conference on Computer Communications (INFOCOM'13)*, pp. 2995-3003, Turin, Italy, 2013.

[C10] **K. Yang**, X. Jia and K. Ren. "Attribute-based Fine-Grained Access Control with Efficient Revocation in Cloud Storage Systems". In *Proc. of the 8th ACM Symposium on Information, Computer and Communications Security (AsiaCCS'13)*, pp. 523-528, Hangzhou, China, 2013.

[C9] B. Zhang, X. Jia, **K. Yang** and R. Xie. "Multi-path Routing and Stream Scheduling with Spatial Multiplexing and Interference Cancellation in MIMO Networks". In *Proc. of the 33rd International Conference on Distributed Computing Systems Workshops (ICDCS'13 Workshops)*, pp. 256-261, Philadelphia, USA, 2013.

[C8] R. Xie, X. Jia, **K. Yang** and B. Zhang. "Energy Saving Virtual Machine Allocation in Cloud Computing". In *Proc. of the 33rd International Conference on Distributed Computing Systems Workshops (ICDCS'13 Workshops)*, pp. 256-261, Philadelphia, USA, 2013.

## 2012

[J2] **K. Yang** and X. Jia. "Data Storage Auditing Service in Cloud Computing: Challenges, Methods and Opportunities". *World Wide Web*, vol. 15, no. 4, pp 409-428, July 2012. (Notable Paper in Computing Reviews Best of 2012)

[C7] **K. Yang** and X. Jia. "Attributed-based Access Control for Multi-authority Systems in Cloud Storage". In *Proc. of the 32nd International Conference on Distributed Computing Systems (ICDCS'12)*, pp. 536-545, Macau, 2012.

**2010**

[C6] **K. Yang**, X. Jia, B. Zhang and Z. Zheng. "Threshold Key Redistribution for Dynamic Change of Authentication Group in Wireless Mesh Networks". In *Proc. of IEEE Global Telecommunications Conference (GLOBECOM'10)*, pp. 1-5, Miami, FL, 2010.

[C5] B. Zhang, Z. Zheng, X. Jia and **K. Yang**. "A Distributed Collaborative Relay Protocol for Multi-hop WLAN". In *Proc. of IEEE GLOBECOM'10*, pp. 1-5, Miami, FL, 2010.

[C4] Z. Zheng, B. Zhang, X. Jia, J. Zhang and **K. Yang**. "Minimum AP Placement for WLAN Adaptation using Physical Interference Model". In *Proc. of IEEE GLOBECOM'10*, pp. 1-5, Miami, FL, 2010.

**Before 2009 (My Undergraduate Work)**

[J1] **K. Yang**, L. Huang, W. Yang and F. Song. "Quantum Teleportation via GHZ-like State". *International Journal of Theoretical Physics*. vol. 48, no. 2, pp 516-521, February 2009.

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