Yongzhi Wang

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Google Scholar: https://scholar.google.com/citations?user=ZyDYXIQAAAAJ
Homepage: https://drvoyager.github.io

Professional Experience

- **Texas A&M University at Corpus Christi** – Corpus Christi, Texas, US

  Assistant Professor, 08/2023 - Present
- **Park University** – Parkville, Missouri, US

  Associate Professor, 08/2022 – 07/2023.

  Assistant Professor, 01/2018 – 07/2022.
- **Xidian University** – Xian, Shaanxi, China

  Lecturer, 09/2015 – 12/2017
- **Florida International University** – Miami, Florida, US

  Research Assistant, Teaching Assistant, 08/2010 – 07/2015
- **IBM** – Xian, Shaanxi, P.R. China

  Staff Software Engineer, 04/2007 – 05/2010

Education

- **Doctor of Philosophy in Computer Science**, 08/2010 – 07/2015 (GPA: 3.91)

  Florida International University – Miami, Florida, U.S.A.

  Dissertation: *Constructing Secure Outsourced Computing Framework in the Cloud Environment*
- **Master of Science in Computer Science**, 08/2010 – 04/2013 (GPA: 3.91)

  Florida International University – Miami, Florida, U.S.A.
- **Master of Engineering in Computer Science**, 09/2004 – 03/2007

  Xidian University – Xian, Shaanxi, P.R. China.
- **Bachelor of Engineering in Computer Science**, 09/2000 – 07/2004

  Xidian University – Xian, Shaanxi, P.R. China.

Awards

- **Trending Article,** IEEE Transactions on Computers, 2021.08
- **Distinguished Faculty Scholar Award,** Park University, 2020.04 (**The only recipient in the university**)

- **Best Paper Award,** 2017 International Conference on Networking and Network Applications. Katmandu, Nepal, 2017.10 (**first author**)
- **Second Place, Faculty Teaching Competition**, Xidian University, 2016
- **Dissertation Year Fellowship**, Florida International University, 2015

Media Coverage

- **Kansas nuclear facility hack serves as a warning to remain on guard, cyber expert says**, KMBC News, 2022.03

Research

Research Grants

CAHSI-Google Institutional Research Program, "Protect On-Device AI Security with Multi-Enclave Architecture and Autoencoder", (PI, Amount: $80,000 and $20,000 of Google Cloud Credit), 2024-2025.

2024 Texas A&M Engineering Experiment Station (TEES) research collaboration Award, Trustworthy Cyber Intelligence, (Co-PI, Amount: $2,500), 2024-2025

Capacity Building for Research at Minority-Serving Institutions: Infrastructure Research Readiness (CyBR-MSI: IRR), American Society for Engineering Education, Co-PI, Amount: $3,000, 2024.

Faculty Research Endowment Funds, Park University, "Research on Blockchain Technologies", PI, Amount: $2,500, 2019-2020**.**

Spark Tank Education Funds, Park University, "vPark: Virtualized Lab Environment for Computer Education", PI, Amount: $5,000, 2018-2019.

National Science Foundation of China, Research on Hybrid-cloud-based Computing Integrity and Sensitive Data Confidentiality Protection on Outsourced Computing, PI, Amount: ¥210,000 ($35,000), 2017-2019.

Publications

Book Chapter

[1] Yongzhi Wang, "Technical Details and Educational Application for Virtual Reality Technologies", in ***Current and Prospective Applications of Virtual Reality in Higher Education***, pp. 74-95. IGI Global, 2021

Journal Publications

[2] Yongzhi Wang, Pengfei Gui, Mehdi Sookhak, "Sort-then-insert: A space efficient and oblivious model aggregation algorithm for top-k sparsification in federated learning", in **Future Generation Computer Systems (FGCS)**, vol. 158, pp. 1-10, Sep 2024.

[3] Zhichao You, Xuewen Dong, Ximeng Liu, Sheng Gao, Yongzhi Wang and Yulong Shen, "Location Privacy Preservation Crowdsensing with Federated Reinforcement Learning," in **IEEE Transactions on Dependable and Secure Computing(TDSC)**, doi: 10.1109/TDSC.2024.3398994.

[4] Jiehan Zhou, Haisheng Yu, Zhixiong Chen and Yongzhi Wang, "Special Section on Next-Generation Networks for Industry 4.0: Using Cutting-Edge Technologies to Connect, Communicate, and Compute [Editorial]," in **IEEE Systems, Man, and Cybernetics Magazine**, vol. 9, no. 1, pp. 3-72, Jan. 2023, doi: 10.1109/MSMC.2022.3224355.

[5] Yongzhi Wang, X. Zhang, Y. Wu and Y. Shen, "Enhancing Leakage Prevention for MapReduce," in **IEEE Transactions on Information Forensics and Security (TIFS)**, vol. 17, pp. 1558-1572, 2022, doi: 10.1109/TIFS.2022.3166641.

[6] Yongzhi Wang, Y. Zou, Y. Shen and Y. Liu, "CFHider: Protecting Control Flow Confidentiality with Intel SGX" in **IEEE Transactions on Computers (TC)**, vol. , no. 01, pp. 1-1, 5555. 2021, doi: 10.1109/TC.2021.3122903

[7] Yongzhi Wang, Yulong Shen, Cuicui Su, Jiawen Ma, Lingtong Liu, Xuewen Dong, "CryptSQLite: SQLite with High Data Security" in **IEEE Transactions on Computers (TC),** vol. 69, no. 5, pp. 666-678, 1 May 2020.

[8] Hua Wang, Yongzhi Wang, Tarek Taleb, Xiaohong Jiang, "Editorial: Special issue on security and privacy in network computing" in **World Wide Web (WWW)** vol. 2020, no. 23 pp. 951-957, 25 July, 2019.

[9] Yongzhi Wang, Yulong Shen and Xiaohong Jiang, "Practical Verifiable Computation–A MapReduce Case Study," **in IEEE Transactions on Information Forensics and Security (TIFS),** vol. 13, no. 6, pp. 1376-1391, June 2018.

[10] Yongzhi Wang, Yulong Shen, Hua Wang, Jinli Cao, Xiaohong Jiang, MtMR: Ensuring MapReduce Computation Integrity with Merkle Tree-based Verifications. **IEEE Transactions on Big Data**. Vol. 4, No. 3, pp 418-431, Sep, 2018

[11] Yongzhi Wang, Yulong Shen, Xiaopeng Jiao, Tao Zhang, Xu Si, Ahmed Salem, Jia Liu, Exploiting Content Delivery Networks for Covert Channel Communications, **Elsevier Journal of Computer Communications**, 2017, Vol. 99:pp 84-92.

[12] Yulong Shen, Tao Zhang, Yongzhi Wang, Hua Wang, Xiaohong Jiang, MicroThings: A Generic IoT Architecture for Flexible Data Aggregation and Scalable Service Cooperation, **IEEE Communications Magazine**, 2017, Vol. 55, Issue 9, pp 86-93.

[13] Ke Cheng, Liangmin Wang, Yulong Shen, Hua Wang, Yongzhi Wang, Xiaohong Jiang, Hong Zhong, Secure K-NN Query on Encrypted Cloud Data with Multiple Keys, **IEEE Transactions on Big Data**, Vol, PP, No. 99, 2016

[14] Yongzhi Wang, Jinpeng Wei, Shaolei Ren, Yulong Shen, Toward integrity assurance of outsourced computing - a game theoretic perspective, Elsevier Journal of Future Generation Computer Systems (FGCS), 2016, 55:87-100.

[15] Yongzhi Wang, Jinpeng Wei. "Towards Protecting Control Flow Confidentiality on Cloud Based Computation." **Elsevier Journal of Computers and Security (Computers & Security)**. Vol. 52, pp.106-127, July 2015. doi:10.1016/j.cose.2015.04.005.

[16] Yongzhi Wang, Jinpeng Wei, Yucong Duan. "Securing MapReduce Result Integrity via Verification-based Integrity Assurance Framework." International Journal of Grid and Distributed Computing (IJGDC), Vol. 7, No. 6, 2014, pages 53-77.

[17] Yongzhi Wang, Jinpeng Wei, Mudhakar Srivatsa. "Cross Cloud MapReduce: A Result Integrity Check Framework on Hybrid Clouds". International Journal of Cloud Computing (IJCC), Vol. 1, No. 1, 2013, pages 26-39.

[18] Yucong Duan, Keman Huang, Dan Chen, Yongzhi Wang, Ajay Kattepur, Wencai Du, "Service Value Broker Patterns: An Empirical Collection and Analysis". International Journal of Networked and Distributed Computing (IJNDC), Vol. 2, No. 1, 2013, pages 54-69.

[19] Yongzhi Wang, Zhenguo Ding "Research on the Protocol Analysis Module Based on the TCP Splicing Method". Science Technology and Engineering (Chinese Journal). Vol. 7, no. 5, 2007, pages 782-785.

Conference Publications (Full Papers)

[20] Yongzhi Wang and Venkata Sai Ramya Padmasri Boggaram, "Towards Protecting On-Device Machine Learning with RISC-V based Multi-Enclave TEE," **2024 33rd International Conference on Computer Communications and Networks (ICCCN)**, Kailua-Kona, HI, USA.

[21] Yongzhi Wang, Wen-Jung Hsin, Manish Lamsal, EdGENI: Making GENI User-Friendly for General Computer Education, **The 53rd ACM Technical Symposium on Computer Science Education (SIGCSE2022)**, March 2 - March 5, Providence, Rhode Island, USA.

[22] Ke Cheng, Liangmin Wang, Yulong Shen, Yangyang Liu, Yongzhi Wang, Lele Zheng, A Lightweight Auction Framework for Spectrum Allocation with Strong Security Guarantees, **IEEE Conference on Computer Communications (INFOCOM'20)**, July 6- July 9. 2020, Virtual Conference (Due to COVID-19).

[23] Anter Faree, Yongzhi Wang, Protecting Security-Sensitive Data Using Program Transformation and Intel SGX, **2019 International Conference on Networking and Network Applications (NaNA'19)**, Oct 10-Oct 13, 2019, Daegu City, South Korea.

[24] Yongzhi Wang, Yulong Shen, Cuicui Su, Ke Cheng, Yibo Yang, Anter Faree, and Yao Liu, "CFHider: Control Flow Obfuscation with Intel SGX", **IEEE Conference on Computer Communications (INFOCOM'19),** Apr 29- May 2. 2019, Paris, France.

[25] Ke Cheng, Yulong Shen, Yongzhi Wang, Liangmin Wang, Xiaohong Jiang, Jian-feng Ma, Cuicui Su, "Strongly Secure and Efficient Range Queries in Cloud Databases under Multiple Keys", **IEEE Conference on Computer Communications (INFOCOM'19)**, Apr 29- May 2. 2019, Paris, France.

[26] Zhu, Feng, Youngtae Yun, Jinpeng Wei, Brent Byunghoon Kang, Yongzhi Wang, Daehyeok Kim, Peng Li, He Xu, and Ruchuan Wang. "A Reflective Covert Channel Attack Anchored on Trusted Web Services." In **International Conference on Web Services (ICWS '18),** pp. 84-99. Springer, Cham, 2018.

[27] Yongzhi Wang, Lingtong Liu, Cuicui Su, Jiawen Ma, Lei Wang, Yibo Yang, Yulong Shen, Guangxia Li, Tao Zhang, Xuewen Dong, "CryptSQLite: Protecting Data Confidentiality of SQLite with Intel SGX", 2017 International Conference on Networking and Network Applications, Oct 16 – Oct 19, 2017, Katmandu, Nepal. (**Best paper award**)

[28] Cuicui Su, Yongzhi Wang, Yulong Shen, Ke Cheng, Jiawen Ma, "Improving Database Storage Usability with the Cloud-based Architecture", IEEE 2nd International Conference on Data Science in Cyberspace (DSC), June. 26- June. 29, 2017, Shenzhen, China.

[29] Yucong Duan, Nanjangud Narendra, Wencai Du, Yongzhi Wang, Nianjun Zhou, "Exploring Cloud Service Brokering from an Interface Perspective" **21th IEEE International Conference on Web Services (IEEE ICWS 2014),** June 27 – July 2, 2014, Alaska, USA.

[30] Yucong Duan, Yongzhi Wang, Jinpeng Wei, Ajay Kattepur and Wencai Du "Value Added Modeling and Analysis on Service Value Brokerage". The 1st International Workshop on Cloud Service Brokerage (CSB 2013), co-located with the 11th International Conference on Service Oriented Computing (ICSOC 2013), Berlin, Germany, December 2-5, 2013, pages 209-222.

[31] Yongzhi Wang, Jinpeng Wei, Mudhakar Srivatsa, Yucong Duan, and Wencai Du. "IntegrityMR: Integrity Assurance Framework for Big Data Analytics and Management Applications". Proceedings of the IEEE International Conference on Big Data (IEEE Big Data 2013) Knowledge Management and Big Data Analytics Workshop, October 6-9, 2013, pages 17-24.

[32] Yucong Duan, Yongzhi Wang, Jinpeng Wei, Ajay Kattepur, and Wencai Du. "Constructing E-Tourism Platform Based on Service Value Broker: A Knowledge Management Perspective". Proceedings of the IEEE International Conference on Big Data (IEEE Big

Data 2013) Knowledge Management and Big Data Analytics Workshop, October 6-9, 2013, pages 33-40.

[33] Yongzhi Wang, Jinpeng Wei, and Mudhakar Srivatsa. "Result Integrity Check for MapReduce Computation on Hybrid Clouds". Proceedings of the 6th IEEE International Conference on Cloud Computing (IEEE CLOUD 2013), IEEE Computer Society, Santa Clara, CA, June 27-July 2, 2013, pages 847-854.

[34] Yongzhi Wang, Jinpeng Wei. "VIAF: Verification-based Integrity Assurance Framework for MapReduce". Proceedings of the fourth IEEE International Conference on Cloud Computing (IEEE CLOUD 2011), IEEE Computer Society, Washington DC, July 4-9, 2011, pages 300-307.

Conference Publications (Poster Papers)

[35] Yongzhi Wang, General and secure support of legacy computations on TEE, **2023 Annual Computer Security Applications Conference (ACSAC)**, December 4-8, 2023, Austin, Texas, USA. Work-in-progress paper.

[36] Yongzhi Wang, Wen-Jung Hsin, Improving User Experience for GENI-based Cybersecurity Labs, **ACM Special Interest Group on Computer Science Education Technical Symposium (SIGCSE2020)**, March 11 - March 14, Portland, Oregon, USA. Poster paper.

[37] Xiaoyu Zhang, Yongzhi Wang, Yu Zou, Reconsidering Leakage Prevention in MapReduce, **IEEE Conference on Computer Communications (INFOCOM' 20),** July 6- July 9. 2020, Virtual Conference (Due to COVID-19), Poster paper.

[38] Yu Zou, Yongzhi Wang, Xiaoyu Zhang, Enforcing Control Flow Confidentiality with SGX, **IEEE Conference on Computer Communications (INFOCOM' 20)**, July 6- July 9. 2020, Virtual Conference (Due to COVID-19), Poster paper.

[39] Yongzhi Wang, Yulong Shen, Ke Cheng, Yibo Yang, Cuicui Su, and Anter Faree. 2018. Obfuscating program control flow with Intel SGX. In Proceedings of the **40th International Conference on Software Engineering: Companion Proceedings (ICSE '18).** ACM, New York, NY, USA, 321-322., Poster Paper.

[40] Yongzhi Wang, Yulong Shen, "RIA – An Audition-based Method to Protect the Runtime Integrity of MapReduce Applications", **23rd ACM Conference on Computer and Communications Security (ACM CCS 2016)**, Oct 24-28, 2016, Vienna, Austria. Poster Paper.

[41] Yongzhi Wang, Jinpeng Wei, Mudhakar Srivatsa. "Cross Cloud MapReduce: an Uncheatable MapReduce". **The 33rd IEEE Symposium on Security and Privacy (IEEE S&P 2012),** San Francisco, CA, May 20-23, 2012. Poster paper.

Teaching

Courses Taught for Texas A&M University (2023 - Present)

COSC6375 Information Assurance

- Semesters: Spring 2025 (F2F, 16 weeks)
- Course Content: This course provides the foundation for understanding the key issues associated with protecting information assets, determining the levels of protection and

response to security incidents, and designing a consistent, reasonable information security system, with appropriate intrusion detection and reporting features. The purpose of the course is to provide the student with an overview of the field of information security and assurance. Students will be exposed to the spectrum of security activities, methods, methodologies, and procedures. Coverage will include inspection and protection of information assets, detection of and reaction to threats to information assets, and examination of pre- and post-incident procedures, technical and managerial responses, and an overview of the information security planning and staffing functions.

COSC6352 Advanced Operating System

- Semesters: Fall 2023, Spring 2024, Fall 2024 (F2F, 16 weeks)
- Course Content: An introduction to advanced concepts in operating systems and distributed systems. Topics include advanced operating system architecture, distributed system architecture, inter-process communication, distributed system coordination, fault tolerance and security.

Academic Programs Developed for Park University (2018-2023)

Cybersecurity, B.S.

- Program Content: Courses offered in the Cybersecurity specialty area prepare students for a cybersecurity career.

Information and Computer Science, Cybersecurity Concentration, B.S.

- Program Content: Courses offered in the Cybersecurity specialty area prepare students for cybersecurity certification exams. Depending on their chosen specialty area, ICS graduates are well prepared for these industry positions: applications programmer, systems analyst, information technology specialist, database analyst, network analyst, web programmer, software engineer, and cybersecurity specialist.

Cybersecurity, Certificate

- This certificate program prepares students for cybersecurity-related positions such as security administrator, security software developer, or security consultant. Each course in the certificate has prerequisite courses. Equivalent work experience or transferred credit may satisfy those prerequisites. Some courses offered in this program help students in preparing for industry certificates, such as the Cisco Cybersecurity Operation (CyberOps) Certification Exam.

Courses Developed for Park University (2018 - Present)

CS377 Digital Forensics

- Course Content: This course will focus on the principles, knowledge, skills, and tools about secure operations of computers, networks, and information technology systems. Topics include security concepts, cryptography, attack methods, security monitoring, incident response, handling and analysis. The course will contain various hands-on security labs. This course includes the concepts in a course recommended by Cisco for Cisco Certified Network Associate (CCNA) Cyber Ops. Due to the particularly dynamic nature of the web environment, course content will change as appropriate.

CS375 Secure Operation

- Course Content: This course will focus on the principles, knowledge, skills, and tools about secure operations of computers, networks, and information technology systems. Topics include security concepts, cryptography, attack methods, security monitoring, incident response, handling and analysis. The course will contain various hands-on security labs. This course includes the concepts in a course recommended by Cisco for Cisco Certified Network Associate (CCNA) Cyber Ops. Due to the particularly dynamic nature of the web environment, course content will change as appropriate.

CS335 Introduction to Cybersecurity

- Course Content: This course introduces students to various security concepts, issues, and countermeasures. The topics to be examined include, but are not limited to, cryptographic techniques and applications, attack and vulnerability identification, defenses and countermeasures, security tools and techniques, and ethical and legal issues. Several of these concepts may be put into practice using laboratory exercises.

Courses Taught for Park University (2018 - Present)

CS377 Digital Forensics

- Semesters: Fall 2 2020 (Online, 8 weeks)
- Course Content: This course will focus on the principles, knowledge, skills, and tools about secure operations of computers, networks, and information technology systems. Topics include security concepts, cryptography, attack methods, security monitoring, incident response, handling and analysis. The course will contain various hands-on security labs. This course includes the concepts in a course recommended by Cisco for Cisco Certified Network Associate (CCNA) Cyber Ops. Due to the particularly dynamic nature of the web environment, course content will change as appropriate.

CS202 Secure Programming

- Semesters: Fall 2020, Fall 2022
- Course Content: This course explores the concepts involved in writing programs that are resistant to errors and resistant to attacks. Students put these concepts into practice with C++ and C. Because students should already know basic programming constructs from their prerequisite programming course, this course covers C++ basics quickly. Students learn about the vulnerabilities in C++/C and strategies for limiting those vulnerabilities when using strings, pointers, dynamic memory management, file I/O, and so on.

NH303 & NH304 Honors Scholarship I & II

- Semesters: Fall 2019, Spring 2020, Fall 2020, Spring 2021
- Course Content: This independent course is structured in which the Honor student continues to work one-on-one with their selected faculty mentor to complete their individual Honors Research Project.

CS375 Secure Operation

- Semesters: Spring 2 2020 (Online, 8 Weeks), Spring 1 2021, Fall 1 2022
- Course Content: This course will focus on the principles, knowledge, skills, and tools about secure operations of computers, networks, and information technology systems. Topics include security concepts, cryptography, attack methods, security monitoring, incident response, handling and analysis. The course will contain various hands-on security labs. This course includes the concepts in a course recommended by Cisco for Cisco Certified

Network Associate (CCNA) Cyber Ops. Due to the particularly dynamic nature of the web environment, course content will change as appropriate. 3:0:3

CS335 Introduction to Cybersecurity

- Semesters: Fall 1 2019, Fall 2 2019, Spring 1 2022, Spring 2 2022 (Online, 8 Weeks), Spring 2020, Spring 2022 (Face to Face, 16 weeks), Spring 2021 (Online 16 weeks), Fall 1 2022.
- Course Content: This course introduces students to various security concepts, issues, and countermeasures. The topics to be examined include, but are not limited to, cryptographic techniques and applications, attack and vulnerability identification, defenses and countermeasures, security tools and techniques, and ethical and legal issues. Several of these concepts may be put into practice using laboratory exercises.

IS362 Applied Database Management

- Semesters: Fall 2018
- Course Content: This course builds on the Data Management Concepts course and focuses on the creation, administration and use of databases. This course assumes a knowledge of database system concepts. The student will be introduced to application program development in a database environment with emphasis on setting up, modifying, and querying a database. 3:0:3

IS361 Data Management Concept

- Semesters: Spring 2018, Fall 2018, Fall 2019, Fall 2020, Fall 2021, Fall 2022
- Course Content: This course provides an overview of data management concepts. This course explores the enterprise perspective of managing data needs of an organization. This includes data integrity, database models, and integration of databases, security, and database administration issues. The student will be introduced to query processing within a database environment.

CS 373 Computer Network Security

- Semester: Spring 2018, Summer 2018, Fall 2018, Spring 2019
- Course Content: This course introduces students to various security concepts, issues, and countermeasures in both computer systems and computer networks. The topics to be examined include, but are not limited to, cryptographic techniques and applications, attack and vulnerability identification, defenses and countermeasures, security tools and techniques, and ethical and legal issues. Several of these concepts may be put into practice using laboratory exercises.

CS 225 Programming Concepts

- Semester: Spring 2019, Spring 2020, Spring 2021, Spring 2022
- Course Content: Programming concepts will be put into practice by using C++ for programming projects. Since C++ is so similar to Java and since students should already know Java from their prerequisite courses, this course will cover C++ basics (control constructs, operators, data types, functions) very quickly. More time will be spent on those features of C++ that differ from Java. For example, more time will be spent on pointers, object-oriented programming techniques, and operator overloading.

Lecturer in Xidian University (2015 - 2017)

C++ Programming Language (For international student)

- Semesters: Fall 2015, Fall 2016
- Course Content: International student course. Course covers all the materials about the C++ language, including the language syntax, object-oriented programming skills, etc.

Data Communications and Networking

- Semester: Fall 2016
- Course Content : Communication technologies, Computer network, TCP/IP Protocol, etc.

Computer Network and Security

- Semester: Spring 2016
- Course Content: Cryptography, Security Protocols, etc.

Undergraduate Students Graduation Thesis Writing

- Semesters: Spring 2016, Spring 2017
- Thesis List:
    - Design and implementation of an Android-based PPT controller
    - Design and implementation of an IOS based PPT controller
    - Design and implementation of a document-based social network (for international student)
    - Improvement of an integrity-assured remote verification system
    - Design and implementation of a simulation system for distributed processing
    - Design and implementation of a virtual reality camera
    - Research on the covert channel communication on Content Delivery Networks (CDNs).
    - Design and implementation of a bus tracking system
- Responsibilities: Design thesis topic; Advise and instruct project development and thesis writing.

Master Student Project Instruction

- Semesters: Fall 2015 - Present
- Project List
    - Design and implementation of a cloud system
    - Design and implementation of a hybrid-cloud-based privacy preserving database
    - Design and implementation of a hardware assisted privacy preserving database
- Responsibilities: Advise and instruct project development and research paper writing.

PhD Student Research Project Instruction

- Semesters: Fall 2016 – Present
- Project List
    - Design and implementation of a hardware assisted privacy preserving database
- Responsibilities: Advise and instruct project development and research paper writing.

Teaching Assistant in Florida International University (2010-2014)

COP5614 Operating System (For graduate students, Lab Session)

- Semester: Spring 2013
- Course Content: Graduate student course. Course covers operating system design principles, algorithms and implementation techniques. The lab session requests students to implement several critical components on a simulated Operating System, Nachos, including process management, memory management, disk I/O, etc.
- Responsibilities: Lab task introduction; background knowledge teaching; lab session instructing; student project grading.

COP4610 Operating System Principles (Lab Session)

- Semester: Fall 2011, Spring 2012, Summer 2012, Fall 2012, Summer 2013, Fall 2013.
- Course Content: Undergraduate student course. Course covers operating system design principles and implementation techniques. The lab session requests students to modify Linux kernel to finish four tasks involving building kernel, developing multi-thread program, implementing memory management algorithm, and implementing disk IO algorithm.
- Responsibilities: Lab task introduction; background knowledge teaching; lab session instructing; student project grading.

COP4703 Information Storage and Retrieval Concepts

- Semester: Spring 2011, Spring 2014.
- Course Content: Undergraduate student course. The course content covers information management and retrieval concepts, relational database design and implementation, online information retrieval and manipulation.
- Responsibilities: student homework grading.

COP4710 Database Management

- Semester: Spring 2011, Spring 2014.
- Course Content: Undergraduate student course. Topics include Semantic Binary, Relational, Network, and Hierarchical Models, E-R Model, Database design; SQL language; Physical Database Organization; Deductive or Rule-based Databases; Fourth-Generational Language.
- Responsibilities: Student homework grading.

COP4338 Computer Programing III

- Semester: Fall 2010.
- Course Content: Undergraduate student course. Advanced C/C++ programing course. Topics include Object-Oriented programming, Advanced Programming Concepts and Modern Programming Techniques.
- Responsibilities: Student homework grading.

CGS2518 Data Analysis (Lab Session)

- Semester: Fall 2010.
- Course Content: Non-computer-science-major undergraduate student course. A hands-on study of how to use a modern spreadsheet program (Office Excel) to analyze data.

- Responsibilities: Lab task introduction; background knowledge teaching; lab session instructing; student project grading.

Teaching Assistant in Xidian University (2005 – 2006)

Database Management (Online Course)

- Semester: Fall 2005, Spring 2006.
- Course Content: Undergraduate student course. Introduction to the logical aspects of databases. Topics include Semantic Binary, Relational, Network, and Hierarchical Models, E-R Model, Database design; SQL; Deductive or Rule-based Databases.
- Responsibilities: Course Teaching; homework designing and grading; exam designing and grading.

Service

External Services

- **Publication Chair**, 2023 IEEE International Conference on Intelligence and Security Informatics, October 2 – 3, 2023, Charlotte, North Carolina, USA
- **Guest Editor**, IEEE Systems, Man, and Cybernetics Magazine, Special Issue on Next Generation Networks for Industry 4.0, 2022-2023.
- **Program Committee**, 2020, 2021, 2023, 2024, 2025 IEEE COMPSAC Symposium on Security, Privacy and Trust in Computing (SEPT).
- **Guest Editor**, World Wide Web, Special Issue of Security and Privacy in Network Computing, 2018-2019
- **Session Chair**, The First International Workshop on Knowledge Management and Big Data Analytics (KMBA), Oct 6 - 9, 2013, Santa Clara, CA, USA.

Selected Review Services

- **Reviewer**, IEEE Transactions on Information Forensics and Security (TIFS)
- **Reviewer**, Elsevier Computers & Security
- **Reviewer**, World Wide Web Journal
- **Reviewer**, IEEE Access.
- **Reviewer**, IEEE Internet of Things Journal.
- **Reviewer**, IEEE Transaction on Very Large-Scale Integration Systems.
- **Reviewer**, IEEE Transaction on Cloud Computing (TCC) – Special Issue on Scientific Cloud Computing.
- **Reviewer**, 2015 International Conference on Computing, Networking and Communications (ICNC 2015)
- **Reviewer**, IEEE Transactions on Computers (TC).
- **Reviewer**, 10th International Conference on Security and Privacy in Communication Networks (SecureCom 2014)
- **Reviewer**, IEEE Transaction on Cloud Computing (TCC) – Special Issue on Cloud Security
- **Reviewer**, IEEE Transactions on Parallel and Distributed Systems (TPDS) – Special issue on Trust, Security, and Privacy.
- **Reviewer**, 14th IEEE /ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid 2014)
- **Reviewer**, 15th IEEE International Symposium on High Assurance Systems Engineering (HASE 2014)
- **Reviewer**, 9th IEEE International Conference on Collaborative Computing (CollaborateCom 2013)

- **Reviewer**, 8th IEEE International Conference on Collaborative Computing" (CollaborateCom 2012)

Internal Services

- **Review Panelist**, Texas Comprehensive Research Fund, Texas A&M University-Corpus Christi (2024)
- **Island Day Volunteer**, Department of Computer Science, Texas A&M University-Corpus Christi (2024)
- **Committee Member, COECS Strategic Planning Committee,** Texas A&M University-Corpus Christi (2024- now)
- **Coordinator, Computer Science Distinguished Speaker Series,** Texas A&M University-Corpus Christi (2023- now)
- **Educational Technology Advisory Committee**, Park University (2020-2023)
- **Diversity and Inclusion Committee Member**, Park University (2019-2023)
- **Faculty Center of Innovation, Faculty Advisory Council,** Park University (2019-2020)
- **Faculty Hiring Committee Member**, Department of Criminal Justice, Park University (2019)
- **Faculty Hiring Committee Member**, Department of Computer Science, Park University (2021)
- **Faculty Hiring Committee Member**, Department of Social Works, Park University (2021)
- **Investigator and Proposer of Cybersecurity Certificate Program,** Department of Computer Science and Information Systems, Park University (2019)
- **Investigator and Proposer of Cybersecurity Specialty Area Program,** Department of Computer Science and Information Systems, Park University (2018)
- **Committee Member of the Graduate Student Colloquium**, School of Computer Science and Technology, Xidian University (2015).
- **Committee Member of the Graduate Student Admission Committee Member**, School of Computer Science and Technology, Xidian University (2015-2016).
- **Coordinator of the visit from Florida International University**, Xidian University (2015)
- **Coordinator for visit from Arizona State University**, Xidian University (2016)
- **Coordinator for visit from Future University, Japan**, Xidian University (2016)
- **Coordinator for visit from Politecnico di Milano, Italy**, Xidian University (2016)
- **Preparation Committee Member for Joint Master Program between University of Central Missouri and Xidian University**, Xidian University (2016)

Professional Societies

- **Member**, Association for Computing Machinery (ACM).
- **Member**, Institute of Electrical and Electronics Engineers (IEEE).